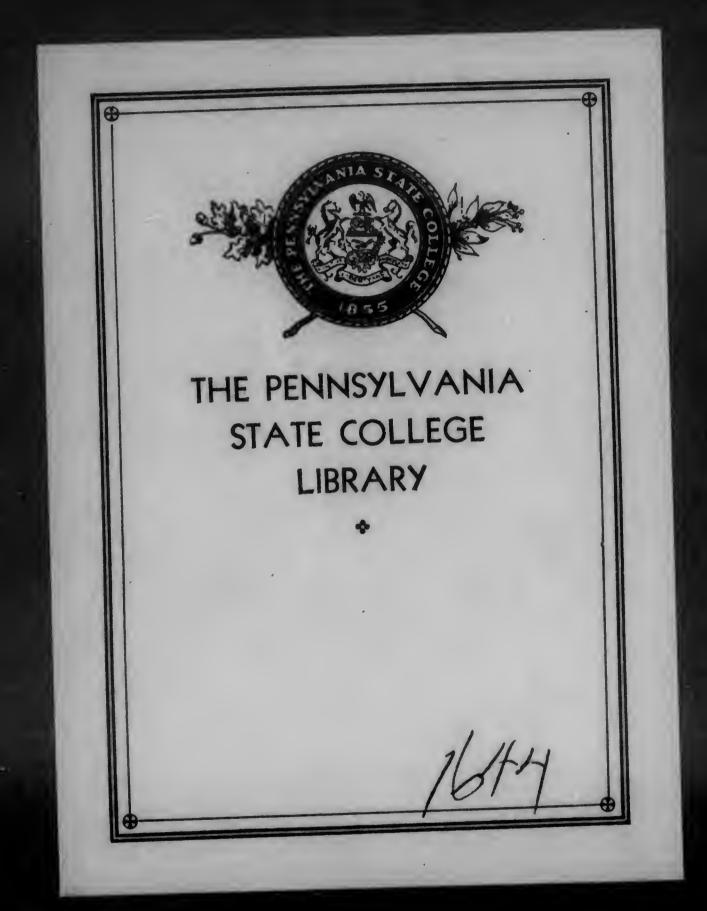
Title: Stream flow records for the water year 1936 / 1937

Place of Publication: Harrisburg, Pa.

Copyright Date: 1936 / 1937

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COMMONWEALTH OF PENNSYLVANIA

DEPARTMENT OF FORESTS AND WATERS DIVISION OF HYDROGRAPHY

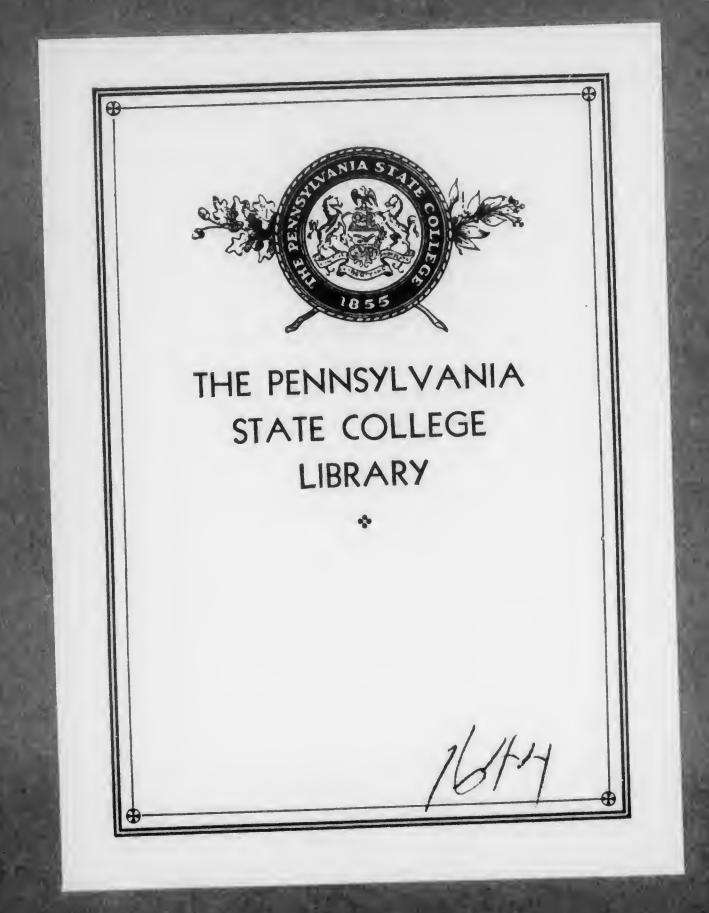
HARRISBURG

STREAM FLOW RECORDS OF PENNSYLVANIA

1937

Prepared in Cooperation
with the
United States Geological Survey

FOR THE YEAR
October 1, 1936 to September 30, 1937



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STREAM FLOW RECORDS

OF

PENNSYLVANIA

for the year

OCTOBER 1, 1936 to SEPTEMBER 30, 1937

STREAM GAGING, FLOOD WARNING, AND PRECIPITATION

This report contains records for the year ending September 30, 1937. All stream flow records previous to and including those for 1911, were published in one volume, Reports of the Water Supply Commission of Pennsylvania—1910 and 1911. For the years 1912 to 1921, they were published in the annual reports of the Water Supply Commission, with the records for 1917-18 and 1919-20 combined and issued in biennial form. Beginning with 1922, the records have been published by the Department of Forests and Waters, Division of Hydrography, in reports entitled, "Stream Flow Records of Pennsylvania." They were published annually with the exception of those for the four years 1929-32, which were issued in one volume. Prior to 1913 they were compiled and published for calendar years. The 1914 records were tabulated for the nine months, January to September. Subsequent records have been published for the water years, October 1 to September 30.

Since June 1, 1931, the water resource investigations in Pennsylvania, including the collection of stream flow data, have been carried on under cooperative agreement with the Water Resources Branch of the United States Geological Survey.

STREAM GAGING

On October 1, 1936, the beginning of the 1937 water year, ninety-two stream gaging stations were in operation. Two stations were discontinued during the year and four new ones were established, thus leaving ninety-four stations in operation at the end of this report period. The location and date of discontinuance of the stations are as follows:

Kiskiminetas River at Avonmore, July 19, 1937. Crum Creek at Woodlyn, September 30, 1937.

The location and date of the establishment of the new stations during the year are as follows:

Kiskiminetas River at Vandergrift, August 13, 1937. Clark Creek near Carsonville, September 9, 1937. Manada Creek at Manada Gap, September 16, 1937. Stony Creek near Dauphin, September 24, 1937. One of the discontinued stations and the four newly established ones were supplied with recorder equipment; thus making fifty-six stations in the State provided with wells, shelters, and water-stage recorders at the end of the 1937 water year.

This volume, with but one exception, contains data for 103 stations, as shown by the tables and map on pages 23-27. The record for the Riegelsville station was not available for publication in this report. It will be published by the United States Geological Survey in their Water Supply Paper, North Atlantic Slope Basins 1937, and will be included with the stream-flow records of Pennsylvania for 1938.

Descriptions of stations, tables of daily and monthly discharge, summary of run-off in second-feet per square mile, run-off depth in inches, precipitation, and per cent run-off to precipitation are given for 91 gaging stations having a satisfactory rating. Descriptions of stations and daily mean gage heights are published for four base stations operated in the Susquehanna River Basin for flood-warning purposes.

The Avonmore station was discontinued on account of unsatisfactory conditions that resulted from the destruction of the highway bridge, to which the gage was attached, during the March 1936 flood.

The Woodlyn station, which was established in the interest of a special study, was discontinued as sufficient data had been collected to serve its purpose.

For stations where the minimum discharge has not been determined and published, a probable estimate can be furnished. Any other information that may be of importance to the engineer making application of these gaging-station records may also be obtained upon request to the Department of Forests and Waters, Division of Hydrography, Harrisburg, Pennsylvania.

The water year 1936-37 was characterized by a number of unusual climatic conditions that were strongly reflected in stream flow. The outstanding features were the high temperature in January, excessive precipitation in January and April, small amount of snowfall, little frost in the ground, high ground-water elevations, short periods of ice effects on stream flow, high stages in the Ohio River Basin streams in January and April, and in general a high stream discharge for the year.

There were excesses in temperature during eight months in the year, with a maximum of 8.2 degrees in January. During that month the precipitation, which was mostly rain, was the greatest ever recorded for any January in Pennsylvania. In April the average precipitation for the State was, with but one exception, the highest ever recorded for that month.

The Ohio River at Pittsburgh, between January 11 and 26, rose to five separate and distinct flood crests ranging in stage from 24.1 to 34.5 feet. Three of these five floods occurred between the 19th and 26th of January and exceeded the flood stage of 25 feet by 3.1 to 9.5 feet. The latter reached a height that had been exceeded only once in 20 years and six times in 105 years. On April 27 the Ohio River at Pittsburgh rose to a stage of 35.1 feet, which was 10.1 feet above flood stage and a height that had been exceeded only five times in 105 years.

The flow in the principal drainage basins of the State for the year ending September 30, 1937, was 18.0 per cent above the mean flow for the 28 years 1910-37, as determined from the total discharge of the Delaware River at Riegelsville, Susquehanna River at Harrisburg, Allegheny River at Franklin, Kiskiminetas River at Avonmore, and Youghiogheny River at Connellsville, which drain a total area of 39.475 square miles or an area equivalent to 87.5 per cent of that of Pennsylvania.

In the Delaware River, the flow for the 1937 water year was 9.7 per cent above the mean flow for the 28 years 1910-37. The flow in the Susquehanna River was 12.8 per cent above the average flow for the 28 years, while the combined discharge of the Allegheny, Kiskiminetas and Youghiogheny Rivers was 32.1 per cent above the mean for the same period.

In general the high flows for the year were in January and April in the Ohio and Susquehanna River Drainage Basins, and in February in the Delaware River Drainage Basin. The low flows were in the fall months of 1936.

FLOOD WARNING

The Flood Warning Service was continued in the Susquehanna River Basin throughout the year. There was no unusual stages in the streams; however, many warnings were issued in the interests of river craft, recreation, and construction works.

PRECIPITATION

Thirty-eight precipitation stations are maintained by the Department of Forests and Waters, and records are received for 15 other stations operated by water companies. Prior to 1920 the Water Supply Commission of Pennsylvania published its precipitation records in their annual reports. Since that time, with the exception of stations that are located in close proximity to others, these records may be found in the monthly and annual reports of the United States Weather Bureau. Records for stations not published by the Weather Bureau are available at the office of the Department of Forests and Waters, Division of Hydrography, Harrisburg, Pennsylvania.

The average precipitation for the State during the year ending September 30, 1937, as deducted from the observations at 145 well-distributed stations, was 46.05 inches—an excess of 3.87 inches as compared with the average, which was computed from the 50 years record 1888 to 1937.

The yearly totals ranged from a minimum of 34.95 inches at Philadelphia, Philadelphia County, to a maximum of 58.01 inches at Confluence, Somerset County. There were 7 months in the year with excesses in precipitation that ranged from 0.18 to 3.08 inches. During the remaining 5 months there were deficiencies in amounts that ranged from 0.45 to 1.54 inches.

The precipitation, which was mostly rain, was the greatest on record for January. It was heaviest on the Ohio River Drainage Basin, though well above the normal on all parts of the State. There was an average of sixteen rainy days during the month. The monthly amounts ranged from 2.63 inches at Lawrenceville, Tioga County, to 10.32 inches at Lycippus, Westmoreland County. A comparison of the monthly records with the average monthly amounts for the 50 years 1888 to 1937 is shown in the following table:

PRECIPITATION ON PENNSYLVANIA FOR THE YEAR ENDING SEPT. 30, 1937

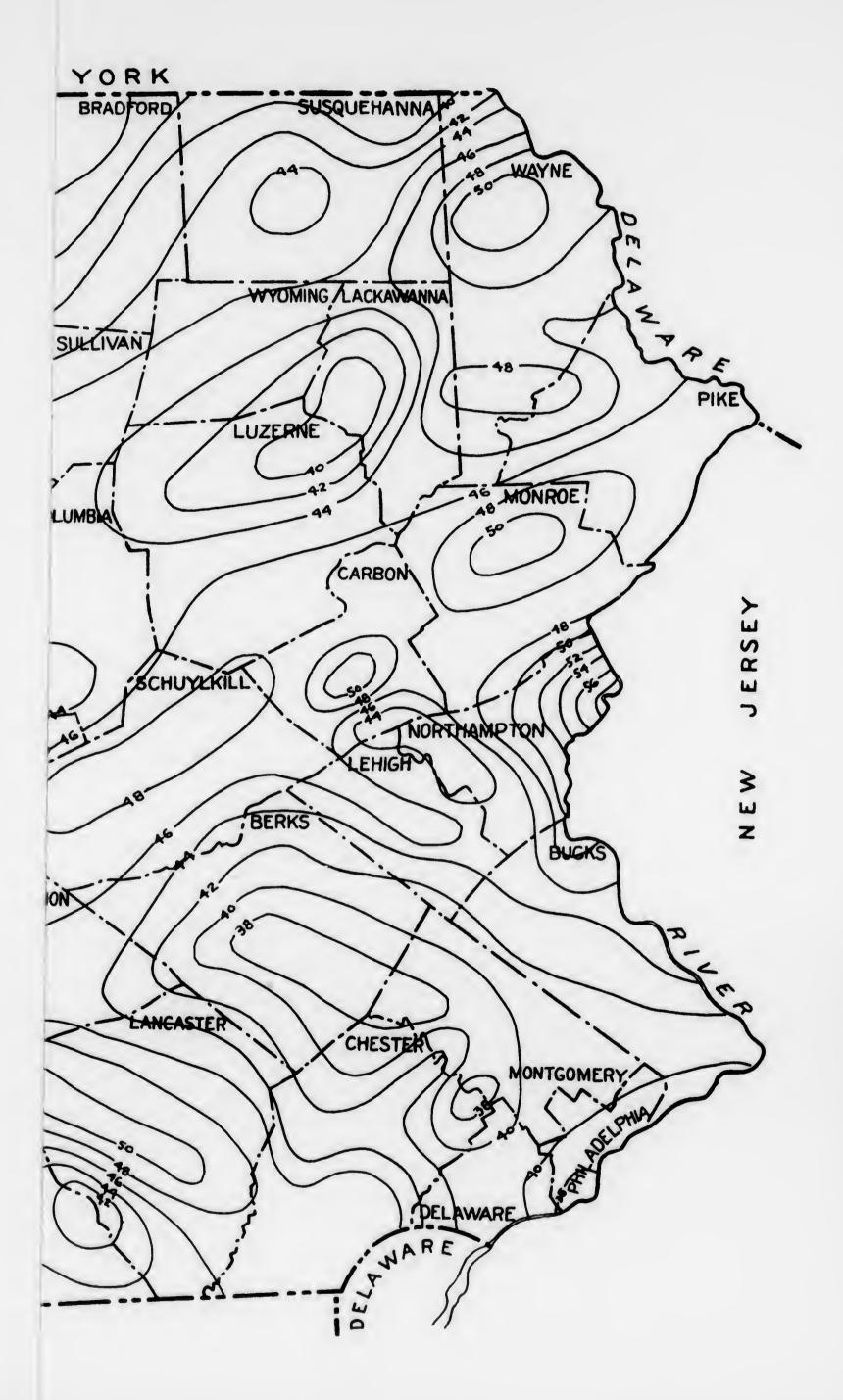
	Precip	itation in	Inches
Month	50-year Average	1936-37	Departure
October	3.17	3.69	+0.52
November	2.85	2.40	— .45
December	3.13	4.19	+1.06
January	3.28	6.36	+3.08
February	2.85	2.32	— .53
March	3.50	2.00	—1.50
April	3.44	5.53	+2.09
May	3.87	3.39	48
June	4.10	4.37	+ .27
July	4.29	4.47	+ .18
August	4.26	5.43	+1.17
September	3.44	1.90	-1.54
The Year	42.18	46.05	+3.87

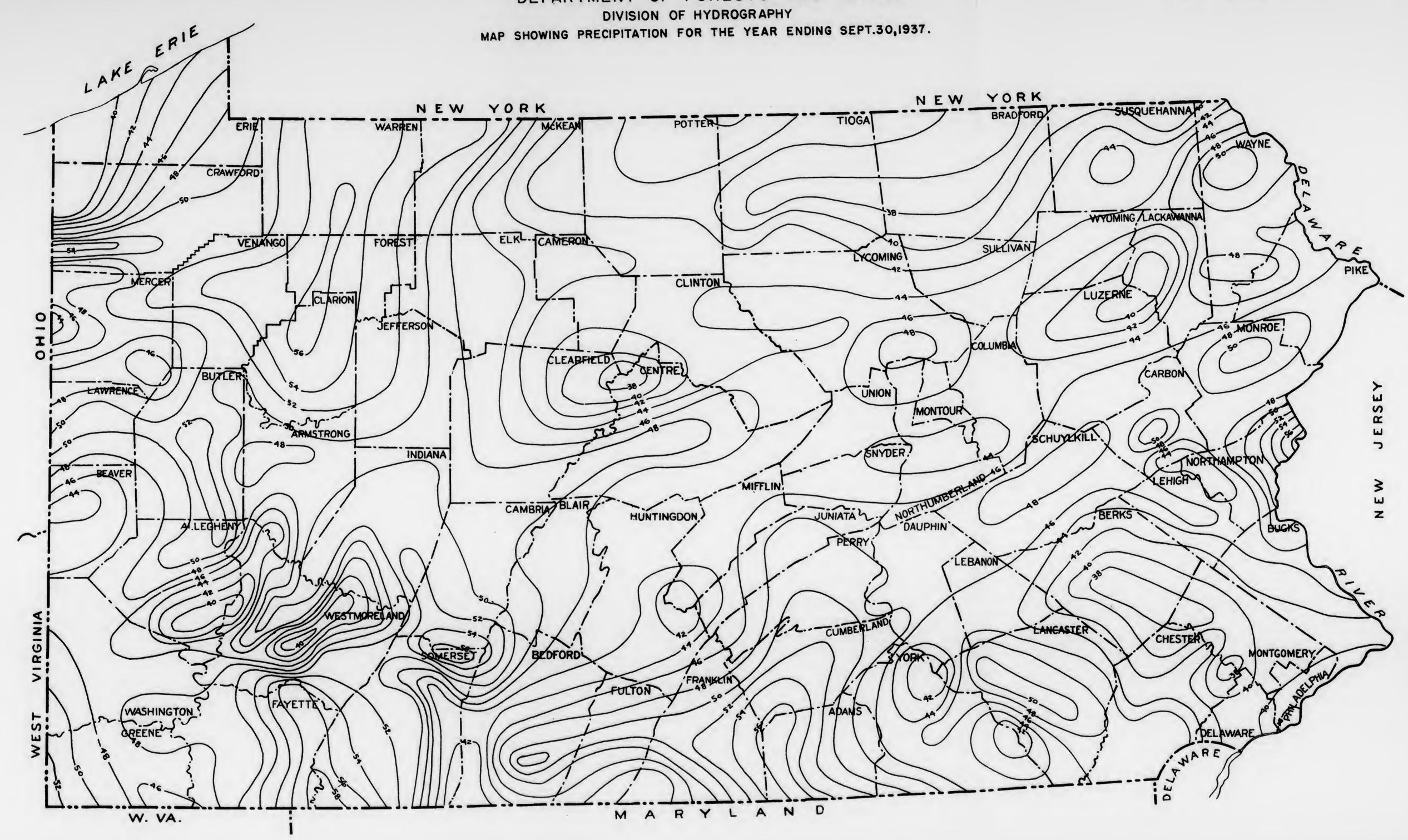
The distribution of precipitation on Pennsylvania during the year ending September 30, 1937, is shown on the map on page 15.

As deducted from the records of the 185 precipitation stations in Pennsylvania used by the Division of Hydrography in determining the per cent run-off to precipitation at gaging 'stations, the average precipitation was about 44 inches on the Delaware River Basin, 45 inches on the Susquehanna River Basin, and 49 inches on the Ohio River Basin.

The monthly and yearly precipitation on Pennsylvania is shown in the following table:

Year	r	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Total
007 00		1 70	1.00	0 50	4.10	0.50	9 55	9 59	4.24	3.04	3.45	7.05	4.84	42.56
887-88 888-89		1.70	1.92 3.37	3.56	4.19 3.54	2.50 1.96	3.55 2.90	2.52 4.50	5.91	5.43	6.80	3.24	5.05	49.86
88 0-9 0		4.02 3.85	6.72	3.14 2.77	3.04	4.32	5.15	3.46	6.71	3.42	3.52	5.76	4.57	53.29
890-91		5.87	1.49	3.97	3.64	4.61	5.10	2.08	2.12	4.50	6.32	5.09	2.39	47.18
891-92		3.06	2.65	4.09	4.77	1.75	4.14	2.04	5.70	5.64	3.93	3.77	2.81	44.35
892-93		.72	4.34	1.69	2.85	5.92	2.52	4.74	5.54	3.12	3.15	4.50	2.67	41.76
893-94		3.26	2.93	3.06	2.29	3.53	1.63	3.62	8.88	2.57	2.32	1.84	6.30	42.23
804- 05		4.26	2.50	3.95	4.17	1.22	2.31	3.76	2.68	3.50	3.24	3.23	1.71	36.53
395-96		1.99	2.48	3.22	1.43	4.90	4.51	1.75	2.85	4.64	6.89	2.22	4.82	41.70
896-97		3.19	3.55	1.20	2.15	3.28	3.22	3.30	5.24	3.38	6.26	3.17	2.18	40.12
897-98		1.32	5.28	3.95		2.23	4.31	2.93	5.11	2.79	3.36	6.60	1.70	43.8
898-99		5.20	4.08		4.25	4.05	4.87	1.76	3.82	3.51	3.91	4.01	4.70	45.89
9 9 9-00		1.55	2.66	2.98 3.04	3.05	4.22	3.61	1.57	2.79	3.60	4.86	3.33	1.77	35.64
200 01			4 10			~	4 14	5 41	5.56	3.47	3.88	6.81	3.39	44.76
900-01		2.74	4.10	2.08	2.22	.96	4.14	5.41	1.96	5.97	6.04	2.62	4.66	46.28
901-02		1.23	2.56	5.91	2.80	3.99	3.98	3.56 3.53	1.67	6.53	5.36	5.29	2.09	48.50
902-03		4.64	1.53	5.54	3.31	4.49	4.52		3.78	4.06	4.68	4.36	3.37	43.4
903-04 904-05		4.64 2.87	2.18	2.66 2.48	3.55	2.41	3.86	3.45 2.84	2.59	4.39	4.87	5.71	3.41	39.56
905-06		4.23	2.47	3.57	2.53	1.70	4.46	3.13	3.23	5.43	4.31	5.62	2.46	43.14
						1.91	4.26	2.64	3.08	4.99	3.84	2.94	6.37	44.30
906-07		4.46	1.48	3.97	4.36		4.76		6.28	2.36	4.81	3.22	1.60	44.93
907-08		3.16	3.60	4.30	2.68	4.65		3.51		4.48	2.14	2.31	2.27	36.0
908-09 909-10		$\begin{array}{c} 1.95 \\ 2.27 \end{array}$	1.40	2.86 3.39	2.92 5.55	3.59	3.07	5.39 5.07	2.90 3.38	4.31	2.42	2.61	4.49	39.0
									1 07	4.71	2.81	7.63	5.29.	41.5
910-11		1.91	2.45	2.65	3.54	2.27	2.57	3.79	1.97 3.15	3.36	5.29	5.02	5.57	40.8
911-12		4.83	2.84	3.27	1.92	2.20	5.05	4.39	3.86	2.26	4.16	2.69	3.28	40.3
912-13		2.74	2.17	3.27	4.95	1.84		3.82	3.34	3.71	4.19	3.85	.99	40.6
913-14 914-15		5.44 2.35	3.05	2.63 4.63	3.37 5.56	2.78 3.90	2.61	4.66 1.92	4.16	4.00	5.28	6.71	2.56	44.1
							4.12			6.14	4.45	2.57	3.77	42.2
915-16		2.65	2.18	4.06	2.42	3.08		3.65	3.19	5.38	4.33	6.69	2.31	40.5
916-17		2.25	2.27	3.07	3.60	1.46	3.68	2.08	3.39	3.46	3.05	4.12	3.97	41.2
917-18		6.38	.63	1.78	3.51	2.46	2.34 3.57	4.53	5.80	3.90	5.90	5.43	2.07	42.7
918-19 919-20		3.17	2.03 5.35	3.38 2.61	2.53	2.23	2.83	2.70	2.02	4.97	4.37	4.66	3.99	44.8
		1 07	0.54	8.28	2.58	2.59	3.33	3.11	3.93	3.12	4.13	3.83	4.68	39.7
920-21		1.67	3. 54 5.75	2.59	2.26	1.99	4.37	3.17	3.21	5.11	3.68	3.14	_	38.9
921-22		2.16	1.21	2.75	4.26	2.16	2.49	2.94	3.50	2.73	4.24	3.10		35.4
922-23 923-24		2.51 2.38	2.83	4.99	4.34	2.94	2.83	4.15	5.71	5.57	3.42	3.78	6.44	49.3
924-25		.28	1.54	2.13	3.53	2.16	2.56	2.32	3.49	3.04	5.57	2.28	2.80	31.7
005 00		4 00	3.56	1.72	2.80	4.06	1.91	2.03	1.78	3.63	3.82	5.69	5.81	41.6
1925-26		4.83	4.49	2.58	2.90	3.48	2.61	3.52	4.14	3.72	4.97	4.12		43.1
1926-27 1927-28		6.40	4.95	4.41	2.90	3.42	3.24	5.50	2.23	7.96	5.44	4.60		52.5
928-29		1.78	2.32	1.16	3.37	2.87	2.69	6.12	4.81	3.56	2.81	2.52		37.7
929-29		5.59	3.39	2.77	2.25	2.69	3.03	2.71	3.03	4.20	2.23	1.47	2.45	35.8
930-31		.99	1.48	2.29	1.46	1.98	2.96	3.33	5.28	3.71	5.28	4.01	3.15	35.9
931-32			1.52	2.85		1.64	4.41	1.71	3.69		3.39			32.9
1932-33			4.75	2.19		2.30	5.33	4.49	5.86		4.28		4.66	
933-34		4 04	1.55	2.88	2.54	1.81	2.96	3.06	2.51		4.01	4.94		
953-34		1.46	3.61	2.55		2.67	2.62	2.56	3.00		5.63			38.8
935-36		2.77	3.84	2.62	4.21	2.33	6.84	3.01	2.09	3.80	2.88	4.96	2.17	41.
936-37		3.69	2.40	4.19		2.32	2.00	5.53	3.39	4.37	4.47		1.90	46.0
									43 435		4 00	4 30	3.44	42.1
I ean		3.17	2.85	3.13	3.28	2.85	3.50	3.44	3.87	1 4.10	4.29	4.26	0.11	26 1





STREAM FLOW RECORDS

DEFINITIONS OF TERMS

The volume of water flowing in a stream—the "run-off" or "discharge"—is expressed in various terms, each of which has become associated with a certain class of work. These terms may be divided into two groups—(1) those that represent a rate of flow, as second-feet, gallons per minute, and discharge in second-feet per square mile, and (2) those that represent the actual quantity of water, as run-off in inches, acre-feet and millions of cubic feet. The principal terms used in this series of reports are second-feet, second-feet per square mile, and run-off in inches. They may be defined as follows:

"Second-feet" is an abbreviation for "cubic feet per second." A second-foot is the rate of discharge of water flowing in a channel of rectangular cross section I foot wide and 1 foot deep at an average velocity of 1 foot per second. It is generally used as a fundamental unit from which others are computed.

"Second-feet per square mile" is the average number of cubic feet of water flowing per second from each square mile of area drained, on the assumption that the run-off is distributed uniformly both as regards time and area.

"Run-off in inches" is the depth to which an area would be covered if all the water flowing from it in a given period were uniformly distributed on the surface. It is used for comparing run-off with rainfall, which is usually expressed in inches.

An "acre-foot" is equivalent to 43,560 cubic feet and is the quantity required to cover an acre to the depth of 1 foot. The term is commonly used in connection with storage and irrigation.

The following terms not in common use are here defined:

"Stage-discharge relation"—an abbreviation for the term "relation of gage height to discharge."

"Control"—a term used to designate the natural section or stretch of the channel or artificial structure below the gage which determines the stage-discharge relation at the gage.

CONVERSION TABLES

The following tables afford a ready means of conversion between the terms in common use in hydraulic computations.

Discharge in second-feet per square mile into run-off in depth in inches

Discharge		Run-off	(depth in	inches)	
(second-feet per square mile)	1 day	28 days	29 days	30 days	31 days
	0.03719 .07438 .11157 .14876 .18595 .22314 .26063 .29752 .33471	1.041 2.083 3.124 4.105 5.207 6.248 7.289 8.331 9.372	1.079 2.157 3.236 4.314 5.398 6.471 7.550 8.628 9.707	1.116 2.231 3.347 4.463 5.578 6.694 7.810 8.926 10.041	1.153 2.906 8.459 4.612 5.764 6.917 8.070 9.223

Note—For part of a month multiply the run-off for 1 day by the number of days.

Discharge in second-feet into run-off in acre-feet

		Run-	off (acre-i	eet)	
Discharge (second-feet)	1 day	28 days	29 days	30 days	31 days
	1.983 8.967 5.960 7.934 9.917 11.90 13.88 15.87 17.85	55.54 111.1 166.6 222.1 277.7 333.2 388.8 444.3 499.8	57.52 115.0 172.6 230.1 287.6 345.1 402.6 460.2 517.7	59.50 119.0 178.5 238.0 297.5 357.0 410.5 476.0 635.5	61.49 123.0 184.5 246.0 307.4 368.9 480.4 491.9 553.4

Note-For part of a month multiply the run-off for 1 day by the number of days.

Discharge in second-feet into run-off in millions of cubic feet

	3	tun-off (m	illions of	cubic feet)
Discharge (second-feet)	1 day	28 days	29 days	30 days	81 days
	0.0864 .1728 .2592 .3456 .4320 .5184 .6048 .6912 .7776	2.419 4.838 7.257 9.676 12.10 14.51 16.98 19.35 21.77	2.506 5.012 7.518 10.02 12.53 15.04 17.54 20.06 22.55	2.592 5.184 7.776 10.87 12.96 15.55 18.14 20.74 23.33	2.678 5.356 8.084 10.71 13.39 16.07 18.75 21.42 24.10

Note—For part of a month multiply the run-off for 1 day by the number of days.

		Run-off (1	millions of	f gallons)	
Discharge (second-feet)	1 day	28 days	29 days	30 days	31 days
1	0.6463	18.10	18.74	19.39	20.04
	1.293	36.20	37.48	38.78	40.08
3	1.939	54.30	56.22	58.17	60.12
	2.585	72.40	74.96	77.56	80.16
	3.232	90.50	93.70	96.95	100.2
6	3.878	108.6	112.4	116.3	120.2
	4.524	126.7	131.2	135.7	140.3
	5.170	144.8	149.9	155.1	160.3
	5.817	162.9	168.7	174.5	180.4

Note-For part of a month multiply the run-off for 1 day by the number of days.

Velocity in feet per second into velocity in miles per hour

(1 foot per second=0.681818 mile per hour, or very nearly two-thirds mile per hour; 1 mile per hour=1.46666 feet per second. In computing the table the values 0.68182 and 1.4667

			Miles	per h	our for	tenths	s of fo	ot per	second	
Feet per second (units)	0	1	2	3	4	5	6	7	8	9
0	0.000 .682 1.36 2.05 2.73 3.41 4.09 4.77 5.45 6.14	0.068 .750 1.43 2.11 2.80 3.48 4.16 4.84 5.52 6.20	0.136 .818 1.50 2.18 2.86 3.55 4.23 4.91 5.59 6.27	0.205 .886 1.57 2.25 2.93 3.61 4.30 4.98 5.66 6.34	0.273 .995 1.64 2.32 3.00 3.68 4.36 5.05 5.73 6.41	0.341 1.02 1.70 2.39 3.07 3.75 4.43 5.11 5.80 6.48	0.409 1.09 1.77 2.45 3.14 3.82 4.50 5.18 5.86 6.55	0.477 1.16 1.84 2.52 3.20 3.89 4.57 5.25 5.93 6.61	0.545 1.23 1.91 2.59 3.27 3.95 4.64 5.32 6.00 6.68	0.614 1.30 1.98 2.66 3.34 4.02 4.70 5.39 6.07 6.75

CONVENIENT EQUIVALENTS

1 inch=1/12 foot=0.027778 yard=0.000015783 mile=2.54 centimeters.

1 foot=12 inches=1/3 yard=0.00018939 mile=0.3048 meter.

1 yard=36 inches=3 feet=0.00056818 mile=0.9144 meter.

1 mile=63,360 inches=5,280 feet=1,760 yards=1.60935 kilometers. 1 meter=100 centimeters=0.001 kilometer=39.37 inches=3.2808 feet=1.0936 yards=0.00062137

SURFACE

1 square inch=0.006944 square foot=0.0007716 square yard=0.0000001594 acre=0.0000000002491 square mile=6.45163 square centimeters.

1 square foot=144 square inches=1/9 square yard=0.000022957 acre=0.00000003587 square mile=0.092903 square meter.

1 square yard=1,296 square inches=9 square feet=0.0002066 acre=0.0000003228 square mile =0.83613 square meter. 1 acre=6,272,640 square inches=43,560 square feet=4,840 square yards=0.0015625 square

mile=208.71 feet square=0.404687 hectare. 1 square mile=4,014,489,600 square inches=27,878,400 square feet=3,097,600 square yards=

640 acres=250 hectares. 1 squaremeter=10,000 square centimeters=0.0001 hectare=0.000001 square kilometer=1,550 square inches=10.7639 square feet=1.19598 square yards=0.0002471 acre= 0.0000003861 square mile.

1 cubic inch=0.004329 United States gallon=0.0005787 cubic foot=16.3872 cubic centimeters. 1 United States gallon=231 cubic inches=0.13368 cubic foot=0.00000307 acre foot=3.78543

liters. 1 cubic foot=1,728 cubic inches=7.4805 United States gallons=0.037037 cubic yard= 0.000022957 acre-foot=28.317 liters.

1 cubic yard=46.656 cubic inches=27 cubic feet=0.00061983 acre-foot=0.76456 cubic meter. 1 acre-foot=325,851 United States gallons=43,560 cubic feet=1,613.333 cubic yards=1,233.49

cubic meters. 1 cubic meter, stere, or kiloliter=1,000,000 cubic centimeters=1,000 liters=61,023.4 cubic inches=264.17 United States gallons=35.3145 cubic feet=1.30794 cubic yards= 0.000810708 acre-foot.

HYDRAULICS

1 United States gallon of water weighs 8.34 pounds avoirdupois.

1 cubic foot of water weighs 62.5 pounds avoirdupois.

1 second-foot=7.48 United States gallons per second=448.8 United States gallons per minute =26,929.9 United States gallons per hour=646,317 United States gallons per day.

1 second-foot=60 cubic feet per minute=3,600 cubic feet per hour=86,400 cubic feet per day
=31,536,000 cubic feet per year=0.000214 cubic mile per year.

1 second-foot=0.9917 acre-inch per hour=1.983471 acre-feet per day=723.966942 acre-feet

per year.

1 second-foot=0.028317 cubic meter per second=1.699 cubic meters per minute=101.941 cubic meters per hour=2,446.58 cubic meters per day.

1 second-foot for 1 year (365 days) will cover 1 square mile 1.1312 feet or 13.5744 inches deep. 1 second-foot falling 10 feet=1.135 horsepower.

100 United States gallons per minute=0.223 second-foot=0.442 acre-foot in one day. 1 million gallons per day=1.55 second-feet=3.07 acre-feet per day=2.629 cubic meters per

1 million gallons per month=0.05525 second-feet for one 28-day month=0.05334 second-foot for one 29-day month=0.05157 second-foot for one 30-day month=0.04990 sec-

ond-foot for one 31-day month. 1,000,000,000 (1 United States billion) cubic feet=11,570 second-feet for one day=413 second-feet for one 28-day month=386 secondfeet for one 30-day month=373 second-feet for one 31-day month.

1 horsepower=1 second-foot falling 8.8 feet,

1 horsepower=1 second-foot falling 11.0 feet, 80 percent e_ciency.
1 horsepower=5,694,120 foot-gallons per day=550 foot-pounds per second=33,000 footpounds per minute=1,980,000 foot-pounds per hour=2,545 British thermal units per hour=76 kilogrammeters per second=1.27 kilogrammeters per minute=

1.3405 horsepower=1 kilowatt. 1 inch deep on 1 square mile=2,323,200 cubic feet=0.0737 second-foot for 1 year.

1 foot deep (head of 1 foot)=0.434 pound pressure on 1 square inch.

1 cubic meter per minute=0.5886 second-foot=4.403 United States gallons per second= 1.1674 acre-feet per day

1 foot per second=0.68 mile per hour=1.00/ kilometers per hour. Acceleration of gravity, g=32.16 feet per second.

EXPLANATION OF DATA

The data presented in this report cover the year beginning October 1, 1936, and ending September 30, 1937. At the beginning of January in most parts of the United States much of the precipitation in the preceding three months is stored in the form of snow or ice, or in ponds, lakes, and swamps, or as underground water, and this stored water passes off in the streams during the spring months. At the end of September, on the other hand, the only stored water available for run-off is possibly a small quantity in the ground; therefore, the run-off for the year beginning October 1 is practically all derived from precipitation within that year.

The base data collected at gaging stations consist of records or stage, measurements of discharge, and general information used to supplement the gage heights and dicharge measurements in determining the daily flow. The records of stage are obtained either from direct readings on a staff or chain gage, or from a water-stage recorder that gives a continuous record of the fluctuations. Measurements of discharge are made with a current meter by the general methods outlined in standard textbooks on the measurement of river discharge.

Rating tables giving the discharge for any stage are computed from the rating curves which are constructed from the discharge measurements. The application of the daily gage height to these rating tables gives the daily discharge from which the monthly and yearly mean discharge is computed.

The data presented for each gaging station covered by this report comprise a description of the station, a table showing the daily discharge of the stream, a table of monthly and yearly discharge and run-off, and a summary table of run-off in second-feet per square mile, run-off depth in inches, precipitation, and per cent run-off to precipitation. For stations with insufficient base data to determine the daily discharge, the results of current-meter discharge measurements are published in the table of miscellaneous discharge measurements.

The description of the station gives, in addition to statements regarding location and type of gage, information as to diversions that decrease the flow at the gage, artificial regulation, maximum and minimum recorded discharges, accuracy of the records, and average discharge for the stations that have a record for ten or more years. The maximum discharge given under "Extremes" represents the crest discharge determined from records of stage by water-stage recorders, or in case of nonrecording gages it is determined from floodmarks or from graphs based on gage readings made once daily or more frequently.

The table of daily discharge gives, in general, the discharge in second-feet corresponding to the daily gage height, which may be the mean of two or more readings in the case of a nonrecording gage, or the mean daily gage height obtained from a water-stage recorder graph.

At stations on streams subject to sudden or rapid diurnal fluctuation, the discharge obtained from the rating table and the mean daily gage height may not be the true mean discharge for the day. If such stations are equipped with water-stage recorders, the mean daily discharge may be obtained by averaging discharge at regular intervals during the day or by using an instrument known as the discharge integrator, which has a setting to correspond with the rating curve of a station and determines the mean daily discharge from a continuous gage-height graph.

In the table of monthly discharge, the column headed "Maximum" gives the maximum daily discharge and not the discharge when the water surface was at crest height. Likewise, in the column headed "Minimum," the quantity given is the minimum daily discharge. The column headed "Mean" is the average flow in cubic feet per second during the month. On this average flow are based computations recorded in the remaining columns, which are defined on page 17.

ACCURACY OF FIELD DATA AND COMPUTED RECORDS

The accuracy of stream-flow data depends primarily (1) on the permanency of the stage-discharge relation and (2) on the accuracy of observation of stage, measurements of flow, and interpretation of records.

The station description gives a statement in regard to the general accuracy of the records. "Excellent" indicates that the records are accurate within 5 per cent; "good" within 10 per cent; "fair" within 15 per cent; and "poor" within 20 per cent or more.

The monthly means for any station may represent with high accuracy the quantity of water flowing past the gage, but the figures showing discharge per square mile and run-off in inches may be subject to gross errors caused by the inclusion of large noncontributing districts in the measured drainage area.

The table of monthly discharge gives a general idea of the flow at the station. The table of daily discharge allows more detailed studies of the variation in flow. It should be borne in mind, however, that the observations in each succeeding year may be expected to throw new light on data previously published.

COOPERATION

Financial assistance was rendered by the United States Engineer Office, Pittsburgh, Pa., in the operation and maintenance of the Charleroi, Franklin, Larabee, Parkers Landing, Sugarcreek, Utica, and Wampum gaging stations in the Ohio River Basin. The city of Harrisburg rendered financial assistance in the establishment and operation of the Carsonville, Dauphin, and Manada Gap gaging stations in the Susquehanna River Basin. The stream-flow records for the Delaware River Basin stations at Port Jervis, Belvidere, Riegelsville, and Trenton are furnished by the United States Geological Survey offices at Albany, N. Y. and Trenton, N.J. Records for the Salisbury station in the Ohio River Basin and the Bedford Valley station in the Potomac River Basin are furnished by the United States Geological Survey office at Washington, D. C.

Acknowledgment is due the following agencies for equipment and assistance in the collection of records:

City of Lancaster, (Lancaster).

City of Philadelphia, (Philadelphia).

City of Wilmington, Del., (Chadds Ford).

Clarion River Power Co., Johnstown, Pa., (Piney).

Galtfelter Paper Co., Spring Grove, Pa., (Spring Grove).

Panther Valley Water Co., Lansford, Pa., (Tamaqua).

Pennsylvania Edison Co., Altoona, Pa., (Saxton). Pennsylvania Power and Light Co., Allentown, Pa., (Wilson-

ville). Philadelphia Electric Co., Philadelphia, Pa., (Castle Fin, Harris-

burg, Lancaster, and Manchester).

Robert O. Hayt, Consulting Engineer, Corning, N. Y., (Loyalsock).

Safe Harbor Water Power Corp., Baltimore, Md., (Marietta). Philadelphia Suburban Water Co., Bryn Mawr, Pa., (Langhorne and Woodlyn).

United Engineering and Foundry Co., Vandergrift, Pa., (Van-

dergrift).

1

United States Engineer Office, Baltimore, Md., (Dalmatia, Gapsville, Huntingdon, Marklesburg, Millerstown, Penns Creek, Shermansdale, and Wapwallopen).

United States Engineer Office, Philadelphia, Pa., (Bethlehem and Tannery).

United States Weather Bureau, Harrisburg, Pa., (Corning, Newport, and Sunbury).

West Penn Power Co., Pittsburgh, Pa., (Connellsville).

West Virginia Pulp and Paper Co., Williamsburg, Pa., (Williamsburg).

York Water Co., York, Pa., (York).

The Commonwealth of Pennsylvania is divided into six drainage basins: Delaware, Susquehanna, Potomac, Genesee. Erie and Ohio. The hydrographic data in the following pages are divided into four groups corresponding to the basins in which the stations are located. There are no gaging stations in the Erie or Genesee Basins. The stations in each basin are shown in the following tables and their locations are indicated on the stream gaging map with reference numbers corresponding to those given in the tables.

GAGING STATIONS IN DELAWARE RIVER BASIN*

Station No.	Stream	Location
	Delaware River	Port Jervis, N. Y
2	Delaware River	Belvidere, N. J.
3	Delaware River	Riegelsville, N. J.
4	Delaware River	Trenton, N. J.
5	Lackawaxen River	West Hawley
6	Wallenpaupack Creek	Wilsonville
7	Bushkill Creek	
8	McMichaels Creek	Stroudsburg
9	Lehigh River	Tannery
10	Lehigh River	Bethlehem
11	Tohickon Creek	Pipersville
12	Neshaminy Creek	Langhorne
13	Schuylkill River	Pottstown
14	Schuvlkill River	Philadelphia
15	Little Schuylkili River	Tamaqua
16	Perkiomen Creek	Graters Ford
17	Crum Creek	Woodlyn
18	Ridley Creek	Moylan
10	Chester Creek	Chester
20	Brandywine Creek	Chadds Ford

^{*} For information available on each station, see description of station.

Station No.	Stream	Location
	North Branch of Susquehanna River	Binghampton, N. Y.
1		
1 2 3 4 5 6 7	North Branch of Susquehanna River	Wilkes-Barre
3	North Branch of Susquehanna River	Danville
4	North Branch of Susquellanna River	Sunbury
5	Susquehanna River	Harrisburg
6	Susquehanna River	Marietta
7	Susquehanna River	Corning, N. Y.
8	Chemung River	Monroeton
9	Towarda Creek	Dixon
10	Tunkhannock Creek	Wapwallopen
11	TTT 11 Cmoole	- VV ap Warrer
12	1317 I Duamah at Sugaliananila ivivol i i i i i i i	. 20
13	The state of the s	Troise and the second s
14	The transfer of the control of the c	I DOCIE = == -
15	late the property of Carcattenanna Rivel	
16		
17		
18	137 I D-11 Famle (mook	Decent Creek
19		11 00000
20	T Capala	. I I Tout Lear.
21	T I I I I I I I I I I I I I I I I I I I	TO TO TO THE
22	D Casala	, I Cinis Cross
23		
24	Translatown Branch of Hilliata KIVCI	· · AA IIII WIII DO C. D
25	1T ' 1 - 17	. I Z I W II P -
26	Ct Carala	. II CCCISSON-B
27	Ci-dian Stone Creek	. 4 I I uniting don
28	Dentarin Deanch of Hiniaia Kiver	, Danton
29	The Cappie	. I Tourie
30	n 1 C 1	. I Caps ville
31	C 4 Tarasanla (ecole	· · · · · · · · · · · · · · · · · · ·
32	I A I I Cuanta	. I O I D I D I D I D I D I D I D I D I D
33	(T) Choole	
34	C 1 Cmoole	. I WITH CLUCK WAS
35		
	Clark Crook	. Carson
36	Stony Creek	. Dauphin
37	Stony Creek	Hogestown
38	Conodoguinet Creek	Harner Tayerff
39	Swatara Creek	Manada Can
	1 Capala	. Mangue out
40	1317 - Campungo Creek	Manchester
41	Codorus Creck	. Spring Grove
42	Codorus Creek	Vork
43	South Branch of Codorus Creek	L'angactor
	C Crook	Lancaster
44	Muddy Creek	Castle I'm

GAGING STATIONS IN POTOMAC RIVER BASIN*

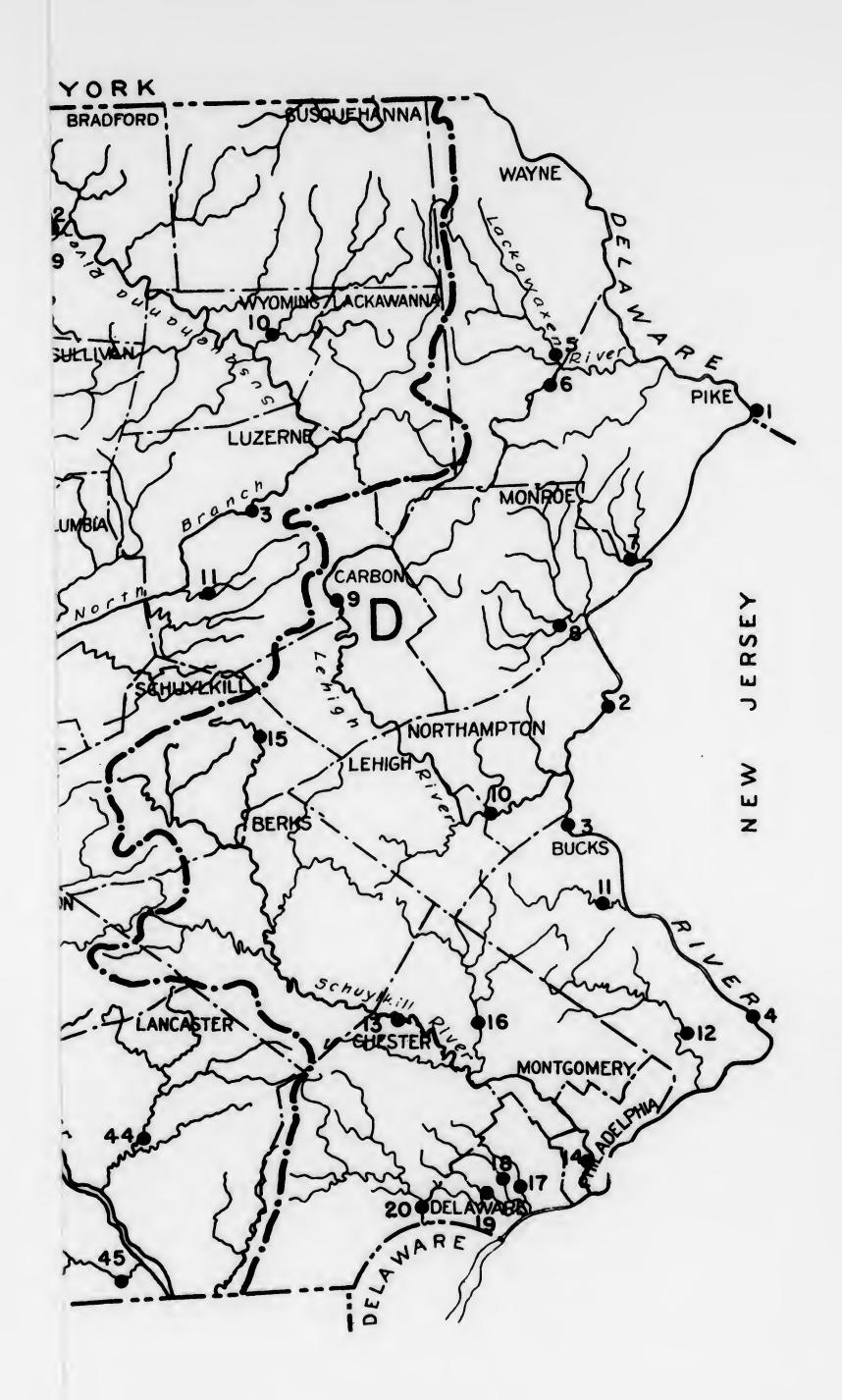
Station No.	Stream	Location		
1 2	Evitts Creek	Bedford Valley Sylvan		

^{*} For information available on each station, see description of station.

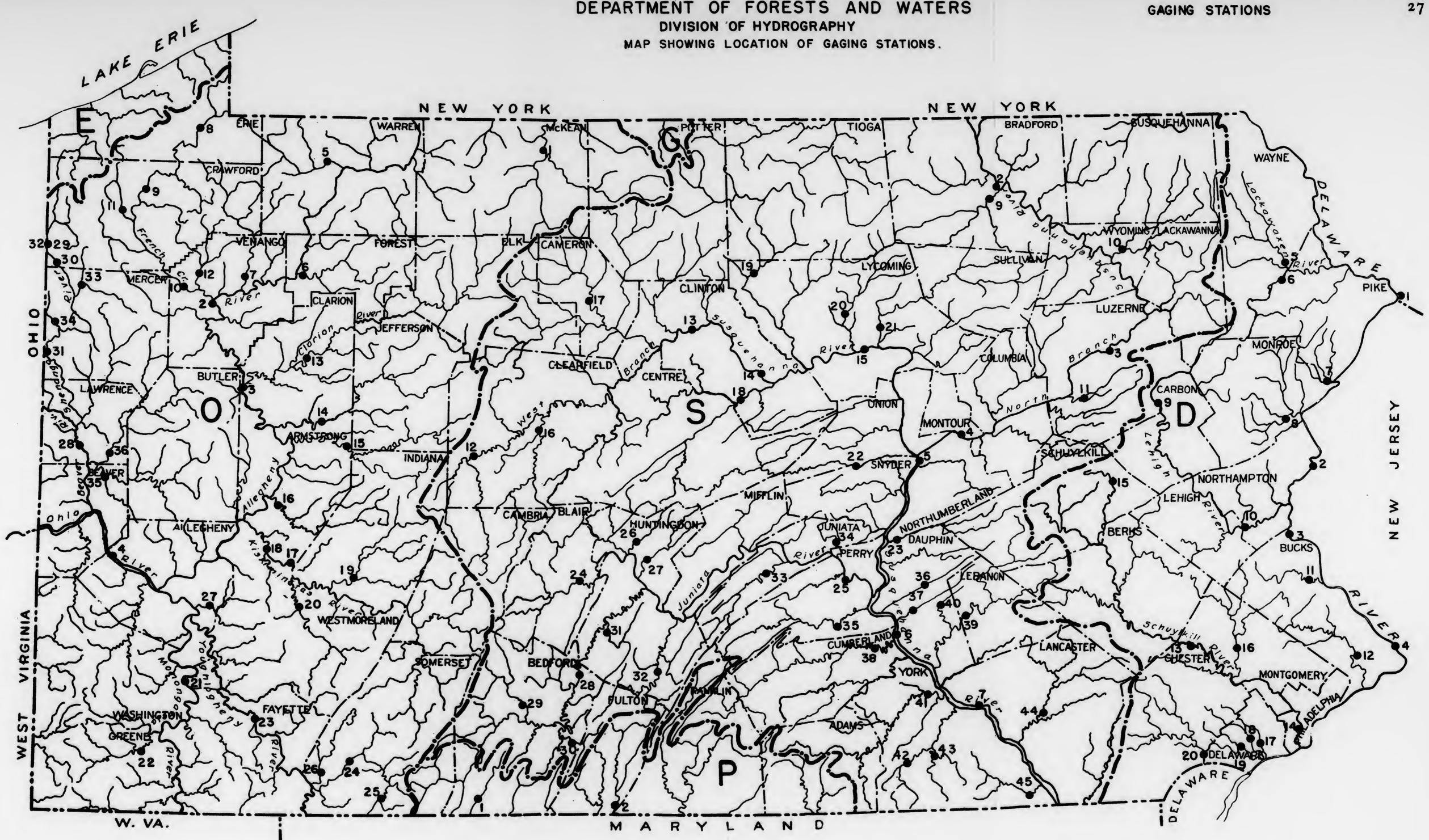
GAGING STATIONS IN OHIO RIVER BASIN*

Station No.	Stream	Location
•	Allegheny River	Larabee
1	1 4 4 4 11 11 24	I I CALLEDANA
2 3 4 5 6 7 8 9	A 11 1 Divion	I alkers Banding
3	101: D'	Sewickies
4	The state of the s	I Duligsvine
5	lm: Carala	I I CDI aska
6		II LUUSC VIII C
7		Carters
8	French Creek	Saegerstown
	French Creek	Utica
10	French Creek	Meadville
11	Cussewago Creek	Sugarcreek
12	Sugar Creek	Pinev
13	Clarion River	St Charles
14	Redbank Creek	Dayton
15	Mahoning Creek	Ford City
16	Crooked Creek	Avonmore
17	Acres 1 Divion .	
18	Tri 1 1 1 -4 - Direct	value grite
19	1 4 44 4 6	I DIACKIEK
20	T 11 Cmoole	THE TALESTON
21	136 Lala Darios	
22		
23	lar 1' 1 and Discour	Connection
24	4	
25	Tr' D' Dam	
26		
27	T 11. Capala	· · · · · · · · · · · · · · · · · · ·
28	lo D'	a a a a a a a a a a a a a a a a a a a
29	10	The state of the s
	Change Diver	I ymatuming Dum
30	10.4	
31	12 D	ymatuming Dum
32	If 'ul Chamanaa River	
33	D teming (reel	Orange vine
34	C C C C C C C C C C C C C C C C C C C	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
35	Slippery Rock Creek	Wurtemburg
36	Suppery Rock Cleck	

^{*} For information available on each station, see description of station.



ESEE; E, ERIE; O, OHIO.



GAGING-STATION RECORDS

DELAWARE RIVER BASIN

GAGING STATION RECORDS DELAWARE RIVER BASIN

Delaware River at Port Jervis, N. Y.

Location. - Water-stage recorder, lat. 41°22'20", long. 74°41'50", near highway bridge at Port Jervis, Orange County, 12 miles above mouth of Neversink River. Zero of gage is 415.35 feet above mean sea level (general adjustment of 1912).

i.

Drainage area. - 3,076 square miles.

Records available. - October 1904 to September 1937.

Average discharge. - 33 years, 5,541 second-feet.

Extremes. - Maximum discharge during year, 46,500 second-feet Feb. 22 (gage height, 10.25 feet), from rating curve extended above 35,000 second-feet; minimum, 720 second-feet Oct. 12 (gage height, 1.50 feet); minimum daily discharge, 848 second-feet Oct. 12.

1904-37: Maximum discharge, 108,000 second-feet Mar. 18, 1936 (gage height, 17.55 feet), from rating curve extended above 35,000 second-feet; minimum, 175 second-feet Sept. 22, 23, 1908 (gage height, 0.60 foot); minimum daily discharge, 175 second-feet Sept. 22, 23, 1908.

Maximum stage known, 25.5 feet Mar. 8, 1904 (affected by ice); maximum discharge known, 155,000 second-feet Oct. 10, 11, 1903, from rating curve extended above 35,000 second-feet.

Remarks. - Records excellent. Regulation from operation of power plants and from storage in Lake Wallenpaupack and in Toronto and Swinging Bridge Reservoirs; combined storage capacity 12,200,000,000 cubic feet. Records furnished by U. S. Geological Survey, Albany, N.Y. U. S. Geological Survey, Albany, N.Y.

Day	Oot.	Nov.	Deo.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,100	3,020	1,860	9,160	8,060	6,120	6,310	7,410	3,580	5,460	1,530	3,230
2	1,530	2,760	1,660	9,290	7,280	6,260	8,450	6,310	3,600	7,090	1,860	2,990
3	1,260	2,590	1,830	7,860	6,040	5,670	8,580	6,110	3,290	6,120	1,950	2,760
4	1,320	2,900	2,120	8,260	4,290	5,060	7,660	5,830	3,430	5,250	1,860	2,370
5	1,200	13,300	2,320	7,400	4,140	5,450	7,560	5,200	3,120	4,600	1,730	1,990
6	1,050	22,300	2,330	5,940	4,550	6,020	15,200	4,840	2,930	4,360	1,680	3,630
7	1,150	13,400	2,600	5,440	4,140	4,920	34,400	5,240	6,310	4,170	1,890	5,280
8	1,000	9,900	3,330	5,420	4,200	4,490	23,300	4,730	8,260	3,680	1,210	4,070
9	1,290	8,060	3,990	6,740	4,350	4,400	18,900	4,290	5,870	3,220	1,260	3,51
10	1,340	6,880	3,750	7,660	5,800	3,810	21,900	4,230	4,490	2,770	2,800	3,200
11	1,140	5,590	4,490	7,460	6,780	3,450	15,600	4,170	4,080	2,530	2,940	2,69
12	848	4,760	17,200	6,500	4,760	2,940	12,600	3,730	3,470	3,050	2,910	2,31
13	1,280	4,290	15,400	5,940	4,180	3,270	10,800	3,300	3,000	3,340	5,020	2,49
14	1,480	3,360	10,300	5,590	4,820	3,110	9,840	4,640	3,060	2,600	6,050	3,00
15	1,200	3,450	8,260	7,260	8,460	3,170	10,800	13,600	4,480	2,840	3,850	4,89
16	1,020	3,590	7,070	12,200	7,660	2,990	16,700	24,700	4,970	3,550	3,230	4,37
17	1,570	3,320	6,500	9,620	5,650	3,070	15,800	16,800	3,740	3,290	3,050	3,89
18	1,450	3,140	6,880	9,560	4,760	2,800	12,400	14,100	3,670	2,530	2,850	3,37
19	2,870	2,770	5,610	16,600	4,290	3,300	12,200	12,600	3,470	2,320	2,560	3,05
20	3,070	2,590	6,670	13,000	4,480	3,190	11,600	10,900	4,290	2,810	2,330	3,19
21	2,590	2,360	10,300	10,000	4,440	4,300	10,300	9,730	4,460	2,490	1,900	3,75
22	2,330	2,290	8,420	14,700	29,900	6,910	17,200	8,310	13,600	2,070	1,840	3,43
23	2,290	2,270	6,310	22,400	32,500	7,460	24,900	7,460	16,500	2,060	2,340	2,89
24	2,100	2,370	5,080	15,600	18,200	7,260	19,800	7,660	10,800	1,890	2,470	2,30
25	3,100	2,070	5,420	19,300	13,400	8,380	14,200	6,780	7,800	1,440	2,260	2,05
26	3,860	1,860	5,250	30,400	10,500	8,460	11,900	5,920	5,970	1,440	2,070	2,08
27	3,950	2,180	5,420	19,800	8,860	6,720	11,000	5,290	4,760	2,050	2,540	2,02
28	4,540	1,760	6,190	13,800	7,070	5,760	10,900	5,820	4,900	2,180	5,720	2,64
29	3,660	2,280	7,070	11,600		4,920	10,500	5,000	5,480	2,140	6,760	2,59
30	3,580	1,890	6,500	9,930		4,760	9,170	4,140	5,500	1,840	4,380	2,54
31	3,270		6,280	8,880		5,460		3,450		2,160	3,680	

		Observed		Storage	Observed				
Month	Maximum	Minimum	Mean	Mean	Mean	Per square mile	Run-off in inches		
October	4,540	848	2,046	-172					
November	22,300	1,760	4,793	- 52					
December	17,200	1,660	6,013	+452					
January	30,400	5,420	11,070	+760					
February	32,500	4,140	8,341	+587					
March	8,460	2,800	4,964	+197					
April	34,400	6,310	14,020	+814					
May	24,700	3,300	7,493	+189					
June	16,500	2,930	5,429	- 15					
July	7,090	1,440	3,140	-309					
August	6,760	1,210	2,855	-396					
September	5,280	1,990	3,086	-484					
The year	34,400	848	6,078	+128		1.98	26.82		

The year ..

56,400

1,260

8,499

8,626

Delaware River at Belvidere, N. J.

Location.-Water-stage recorder, lat. 40°49'36", long. 75°05'02", at Belvidere, Warren Courty, just below mouth of Pequest River. Zero of gage is 227.18 feet above mean sea level (Pennsylvania Railroad benchmark).

Drainage area. 4,542 square miles.

Records available. October 1922 to September 1937.

Average discharge. 15 years, 7,906 second-feet, corrected for storage.

Extremes. Maximum discharge during year, 67,200 second-feet Feb. 23 (gage height, 14.50 feet); minimum, 1,140 second-feet Oct. 13 (gage height, 2.74 feet).

1922-37: Maximum discharge, 179,000 second-feet Mar. 19, 1936 (gage height, 25.0 feet); minimum, 838 second-feet Sept. 28, 1932 (gage height, 2.37 feet)

feet). Maximum stage known, 28.6 feet, from authentic high-water mark, Oct. 10, 1903 (discharge, 220,000 second-feet, from rating curve extended above 170,000

Remarks. - Records excellent. Part of monthly table corrected for effect of storage in Lake Wallenpaupack and in Toronto and Swinging Bridge Reservoirs on Mongaup River. Records furnished by U. S. Geological Survey, Trenton, N. J.

Daily and monthly discharge, in second-feet, 1936-37

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
·1 2 3 4 5	2,340 2,070 2,160 1,790 1,740	3,820 3,580 3,360 3,360 4,380	2,540	11,000 13,700 12,300 12,300 11,900	14,100 12,300 10,000 7,910 7,380	9,410 9,020 8,270	9,020 10,000 11,900 11,000 10,000	12,800 10,800 9,410 9,410 8,640	5,000 5,140 4,860 4,860 4,860	7,910 8,270 9,020 7,730 6,860	2,630 2,050 2,340 2,340 2,250	5,000 4,450 4,060 3,700 3,470
6 7 8 9 10	1,590 1,450 1,460 1,410 1,640	23,600 17,600 12,800 10,200 9,020	4,320 4,580 4,860	10,000 8,830 8,830 9,410 10,600	7,380 7,380 6,960 7,200 7,730	8,270 7,030 7,030	15,300 40,100 34,900 24,800 27,200	7,910 7,910 8,270 7,380 6,700	4,580 5,740 10,200 9,220 7,030	6,060 5,900 5,290 4,720 4,190	2,160 2,250 2,250 1,900 1,740	3,580 6,060 6,060 5,000 4,450
11 12 13 14 15	1,740 1,580 1,260 1,560 1,760	5,740 5,140	5,590 12,800 21,800 15,100 11,900	11,500 10,400 9,220 8,640 9,600	9,600 7,730 6,860 7,200 9,800	4,720 5,140	23,600 18,100 15,600 13,700 13,700	6,530 6,210 5,590 6,060 14,300	5,900 5,440 4,860 4,190 4,720	3,700 3,470 4,190 4,060 3,700	3,780 4,860 4,450 6,530 6,210	3,920 3,470 3,140 3,820 4,720
16 17 18 19 20	1,590 1,590 2,750 3,470 4,320	4,450 4,060 3,820	9,410	14,600 15,100 13,700 18,600 19,600	11,500 9,600 7,730 6,860 6,530	4,720 4,720 4,720	18,100 21,200 17,100 14,600 15,100	31,000 25,400 19,600 17,600 15,100	5,900 5,900 5,000 5,900 5,590		4,190 3,820 3,580 3,470 3,140	6,370 5,140 5,000 4,060 3,820
21 22 25 24 25	3,940 3,360 3,140 2,940 2,830	3,040		16,100 16,600 29,000 25,400 23,600		9,220	13,700 17,600 30,300 28,400 21,200	13,200 11,900 10,600 10,200 9,600	6,210 10,800 21,800 15,600 11,500	3,250 2,730 2,830	2,830 2,690 8,830 7,730 5,740	4,190 4,450 4,060 3,360 2,940
26 27 28 29 30 31	3,940 4,320 5,000 5,000 4,190 4,060	2,630 2,540 2,250 2,200 2,440	8,090 8,460 9,220	38,900 31,000 22,400 17,600 15,600 14,100		13,200 11,500 9,800 8,640 7,910 7,910	16,600 16,100 16,600 16,600 14,600	8,640 7,730 7,550 7,910 6,530 5,590	9,020 7,200 6,210 6,860 7,380	2,200 2,210 2,730 2,730 2,630 2,630	4,720 4,450 6,210 13,200 7,380 5,740	2,630 2,630 2,630 3,140 3,140
,				Observ	ed				Correct	d for st		
	Month	M	aximum	Minimu		Mean		1	Mean	Per squa		off in
Nove Deco Jan Feb: Mar Apr May Jun Jul; Aug	ober ember ary oh il e tember		5,000 23,600 21,800 38,900 56,400 13,200 40,100 31,000 21,800 9,020 13,200 6,370	1,260 2,200 2,140 8,640 6,530 4,720 9,020 5,590 4,190 2,200 1,740 2,630		2,645 5,632 8,577 5,810 2,540 7,748 8,560 0,840 7,249 4,367 4,370 4,082			2,473 5,581 9,029 6,570 5,130 7,945 9,370 1,030 7,234 4,059 5,973 5,598	0.54 1.23 1.99 3.65 2.89 1.75 4.26 2.43 1.59 .89	4 0	0.63 1.37 2.29 4.21 5.01 2.02 4.75 2.80 1.77 1.03 1.01

25.79

1.90

Delaware River at Trenton, N. J.

Location. - Water-stage recorder, lat. 40°13'18", long. 74°46'38", 200 feet above Calhoun Street Bridge, Trenton, Mercer County, half a mile above mouth of Assunpink Creek. Zero of gage is 7.77 feet above mean sea level (general adjustment of 1929).

U. S. Geological Survey, Trenton, N. J.

Drainage area. - 6,796 square miles.

Records available. - February 1913 to September 1937.

Average discharge. - 24 years, 11,480 second-feet, corrected for diversions and

Extremes. - Maximum discharge during year, 74,200 second-feet Feb. 23 (gage height, 8.16 feet); minimum, 2,090 second-feet Oct. 1 (gage height, 0.02 foot). Flow in canal not included. 1913-37: Maximum discharge, 227,000 second-feet Mar. 19, 1936 (gage height, 16.66 feet); minimum, 1,220 second-feet Sept. 18, 1932. Flow in canals

Remarks. - Records excellent. Part of table of monthly discharge corrected for diversion in Delaware & Raritan Canal, and for effect of storage in Lake Wallenpaupack, in reservoirs on Mongaup River, and in Lake Hopatcong. Records furnished by

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,610	5,260	3,680	15,200	24,800	16,000	11,900	21,200	7,740	10,700	3,870	8,280
2	4,180	5.080	3,100	17,900	20,800	14,200	13,200	18,300	7,220	10,700	4,010	7,220
3	3,840	4,710	4,040	20,300	17,500	13,500	14,900	16,000	7,220	11,300	3,410	6,740
4	3,480	4,530	5,260	19,100	14,600	12,800	15,600	14,600	6,970	11,000	3,410	6,060
5	2,970	4,710	5,080	17,900	12,800	12,200	14,200	13,800	7,220	9,770	3,450	5,860
6	2,970	13,200	4,890	16,000	12,200	12,500	16,900	13,200	6,970	8,860	3,410	5,650
7	2,820	24,800	8,600	14,900	12,200	12,800	38,900	12,500	6,970	7,740	3,320	6,060
8	2,790	17,100	9,460	15,600	11,900	11,600	49,600	13,200	9,150	7,470	3,680	8,860
9	2,790	13,800	8,000	14,900	11,000	10,400	36,600	12,500	12,500	6,740	3,770	7,470
10	2,940	11,900	7,740	16,700	12,200	10,400	33,500	11,300	10,400	6,280	3,410	6,740
11	2,970	10,400	8,560	19,900	12,800	9,460	34,500	10,400	8,860	5,650	3,100	6,060
12	3,160	8,860	12,800	17,900	13,800	8,560	26,600	10,100	7,740	5,460	7,710	5,460
13	3,000	7,740	26,600	16,000	11,300	8,000	22,100	9,460	6,970	5,260	10,100	5,080
14	2,580	6,970	23,900	14,200	10,700	7,740	19,900	10,100	6,740	5,860	8,280	4,890
15	2,610	6,280	17,500	16,000	12,800	8,280	18,700	17,000	6,280	5,860	9,150	5,650
16	2,940	5,860	14,600	20,300	16,000	8,280	20,300	32,200	6,740	6,970	7,470	6,280
17	3,250	5,650	16,300	23,900	15,200	8,000	26,600	36,600	8,000	6,970	5,860	7,740
18	3,320	5,650	14,900	24,800	12,800	7,740	23,900	27,500	7,740	7,740	5,260	6,500
19	4,530	5,260	13,500	24,800	11,300	8,000	20,300	23,900	7,470	6,280	5,080	6,280
20	5,080	4,890	23,500	29,500	10,400	8,560	19,500	21,200	8,560	5,260	5,080	5,460
21	5,860	4,530	27,500	25,700	10,100	12,800	19,100	18,700	8,000	5,080	4,890	5,260
22	5,260	4,530	25,700	25,700	19,100	16,000	22,100	17,100	11,300	4,890	5,650	5,460
23	4,710	4,180	19,900	36,600	60,500	16,700	36,600	15,200	22,100	4,530	12,300	5,650
24	4,360	4,150	15,200	40,800	47,600	16,700	40,800	13,800	23,000	4,150	22,100	5,260
25	4,180	4,150	13,500	37,700	33,500	16,300	32,500	13,500	16,700	4,110	14,600	4,710
26	4,010	4,110	12,800	46,300	25,700	18,700	25,700	12,200	12,800	3,910	11,000	4,180
27	5,260	3,810	12,200	49,600	21,200	18,300	28,500	11,300	10,700	4,360	9,150	3,940
28	5,460	3,770	12,200	36,600	18,700	15,600	27,500	11,000	9,150	3,810	9,150	3,910
29	6,280	3,450	12,500	28,500		13,800	26,600	10,700	8,560	3,980	11,000	3,840
20	6,060	3,350	13,200	24,800		12,500	24,800	10,400	9,460	3,940	12,500	4,360
31	5,260		12,800	23,000		11,600		8,860		3,910	10,100	
				Opserv	ed			Cor	rected f	or stora	ge & div	ersion
	Month	W	ximum	Minimu		Mean			lean	Per squa	are Run	-off in

		Observed		Corrected for storage & diversion					
Month	Maximum	Minimum	Mean	Mean	Per square mile	Run-off in inches			
October	6,280	2,580	3,920	3,663	0.539	0.62			
November	24,800	3,350	7,089	7,094	1.04	1.16			
December	27,500	3,100	13,210	13,780	2.03	2.34			
January	49,600	14,200	24,230	25,080	3.69	4.25			
February	60,500	10,100	18,340	18,980	2.79	2.90			
March	18,700	7,740	12,190	12,390	1.82	2.10			
April	49,600	11,900	25,400	26,210	3.86	4.31			
May	36,600	8.860	15,740	15,920	2.34	2.70			
June	23,000	6,280	9,641	9,710	1.43	1.60			
July	11,300	3,810	6,405	6,154	906	1.04			
August	22,100	3,100	7,267	6,948	1.02	1.18			
September	8,860	3,840	5,830	5,415	.797	.89			
The year	60,500	2,580	12,390	12,570	1.85	25.09			

Lackawaxen River at West Hawley, Pa.

Location. - Chain gage, lat. 41°28'10", long. 75°11'15", at Riverside Bridge, West Hawley, Wayne County, half a mile above mouth of Middle Creek. Zero of gage is 885.50 feet above mean sea level.

Drainage area. - 206 square miles.

Records available. - Cctober 1931 to September 1937 in reports of U.S. Geological Survey; May 1921 to September 1937 in reports of Pennsylvania Department of Forests and Waters.

Average discharge. - 13 years (1924-37), 355 second-feet

of Forests and Waters.

Average discharge.— 13 years (1924—37), 355 second—feet.

Extremes.— Maximum discharge during year, 6,540 second—feet Feb. 22 (gage height, extremes.— Maximum discharge during year, 6,540 second—feet Feb. 22 (gage height, 9.6 feet, from graph based on gage readings), from rating curve extended above 3,000 second—feet; minimum 20 second—feet Aug. 5, 8; minimum daily discharge, 24 second—feet Aug. 8.

1921—37: Maximum discharge, 14,000 second—feet Mar. 18, 1936 (gage height, 15.32 feet, from floodmarks), from rating curve extended above 3,000 second—feet; minimum 15 second—feet Sept. 2, 3, 1929 (gage height, 0.74 foot). Remarks.— Records poor. Discharge for period of ice effect, Nov. 26 to Dec. 7, determined from gage heights, weather records, and by comparison with records for stations in adjacent drainage areas. Discharge for high stages determined from graphs based on twice—daily gage readings. Regulation at low stages from operation of mills upstream.

operation of mills upstream.

Daily and monthly discharge, in second-feet, 1936-37

ay	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
_					400	293	561	465	146	259	45	47
1	64	105	80	810	420	274	750	271	124	249	56	72
2	107	114	90	561	356			348	107	211	33	91
2 3	95	114	120	536	328	267	638	704	170	170	31	82
4	67	452	170	512	316	278	612	324	170	141	29	80
5	66	2,200	150	377	282	561	549	286	132	197	20	
	64	845	200	301	282	398	2,990	286	161	100	28	82
6	55	515	330	356	278	282	2.180	264	586	100	29	82
7	53	418	316	442	286	242	1,140	232	286	97	24	78
8			305	638	289	246	1,600	211	202	95	29	63
10	61 58	396 310	305	750	442	239	1,440	202	176	84	30	65
						100	3 000	182	173	74	39	67
11	67	290	574	586	308	198	1,000		146	138	82	70
12	66	252	1,600	488	328	170	810	164	140	100	87	91
13	53	214	1,600	442	301	179	638	149	122	100	48	10
14	50	173	512	465	721	164	612	356	189	82		70
15	53	176	442	810	638	173	870	850	264	107	44	1
		3 770	400	780	420	198	870	561	195	249	48	
16	55	170	420	512	348	198	665	420	152	189	33	6
17	78	148	442			205	586	465	149	189	37	78
18	252	140	398	935	286	179	612	398	138	138	34	6:
19	211	121	308	1,070	289 278	179	465	398	122	114	31	6:
20	162	114	870	910	210			-			-	
21	128	114	665	638	337	638	564	320	180	89	29	
22	107	105	328	1,360	1,850	561	2,810 2,620	308	898	93	37	
	91	101	305	1,000	1.850	638	2,620	512	398	74	122	3
23 24	112	105	328	870	1,000	850	1,360	356	264	55	89	5
25	176	118	289	2,360	1,000	1,000	935	286	215	50	65	5
	070			1 000	561	586	721	242	182	61	51	. 4
26	258	110	520	1,890	398	488	721	222	152	50	97	3
27	290	100	488	1,210	352	442	810	293	173	47	198	3
28	251	95	692	780	302	420	692	222	179	45	95	
29	158	90	512	612			561	189	155	40	70	
20	114	85	420 512	536 488		356 398	901	158	100	39	68	
31		Yo	nth			azimum	Minim		Mean	Per squarile		m-off in
			T (II						***			0.65
Oct	ober					290	_	50 35	112 276	0.54		1.50
						2,200		80	429	2.08		2.40
Dec	ember.					1,600			772	5.78		4.52
Jar	MATY					2,360	30			2.86		2.98
Pat	THATY					4,090	27		590	1.77		2.04
Me	coh					1,000	16		364			5.67
	-11					2,990	46		,046	5.08		1.79
A						850	14		320	1.55		1.18
Apr						898	10	7	218	1.06		
May						249	3	59	113	.54		.63
Maj	10											
May Jus	y					198	2	24	56.2	.27		.51
Jul Jul Jul	mst					198	1	56	65.1	.31		.35

Wallenpaupack Creek at Wilsonville, Pa.

Location. - At hydroelectric plant of Pennsylvania Power & Light Co., the dam being at lat. 41°27'35", long. 75°11'05", at Wilsonville, Wayne County, 1 miles south of Hawley.

Drainage area. - 228 square miles.

*

Prainage area. - 228 square miles.

Records available. - October 1918 to September 1921, June 1926 to September 1937

in reports of U. S. Geological Survey; July 1908 to September 1937 in reports of Pennsylvania Department of Forests and Waters.

Average discharge. - 21 years (1913-22, 1925-37), 376 second-feet.

Remarks. - Records good. Flow computed from output of generators. No discharge over spillway during year. Part of monthly table corrected for storage in Lake Wallenpaupack; no corrections made for evaporation. Discharge measurements, records of power-plant operations, and water-surface elevations in lake and tailrace furnished by Pennsylvania Power & Light Co.

Day	Oot.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	342	0	84	0	157	168	215	131	648	287	0	435
2	0	106	91	3.7	89	352	594	0	578	291	196	516
2 3	0	64	98	0	60	161	128	635	606	0	520	431
4	.0	149	78	93	72	229	3.2	731	348	0	391	17
5	0	138	92	70	72	133	794	378	34	0	380	516 431 17 0
6	114	74	0	72	0	0	261	458	0	609	746	0 269
7	27	128	200	236	35	0	84	474	539	630	231	269
8	298	0	77	47	477	517	78	133	626	632	0	492
9	350	85	102	20	148	141	458	0	610	367	806	636
10	315	87	82	0	82	67	218	575	589	224	837	617
11	0	52	34	73	10	243	0	582	430	68	581	172
12	280	63	36	123	45	87	208	223	0	824	417	147
13	425	84	0	89	0	2.5	289	240	0	470	313	415
14	231	28	46	201	0	8.0	374	288	614	280	0	322
15	155	0	43	119	19	213	489	394	537	464	0	439
16	285	134	40	63	176	193	639	112	441	49	326	576
17	0	109	59	0	84	128	50	467	178	0	542	774
18	0	112	71	314	73	307	0	506	337	0	534	127
19	60	94	54	350	51	90	622	488	0	670	434	88
20	144	93	0	451	0	0	616	534	62	564	365	698
21	141	86	80	91	0	0	889	569	277	392	73	752
22	283	0	93	96	21	168	868	132	656	340	0	703
23	195	89	95	180	170	100	924	33	604	456	161	345
24	106	154	0	2.0	122	28	509	507	564	0	273	117
25	0	113	0	556	318	132	7.5	591	328	0	262	198
26	124	0	0	615	149	28	864	53 6	0	317	516	61
27	150	139	0	629	0	0	829	398	0	525	328	817
28	73	830	81	217	0	0	752	512	683	322	0	873
29	124	275	69	231		0	731	0	532	67	0	851
30	127	268	77	45		66	690	0	554	724	242	838
31	60		0	0		349		0		0	341	

		Observed		Corrected for storage					
Month	Maximum	Minimum	Mean	Mean	Per square mile	Run-off in inches			
October	425	0	142	45.1	0.198	0.25			
November	830	0	118	64.9	.285	.32			
December	200	0	57.5	332	1.46	1.68			
January	629	0	161	682	2.99	3.45			
February	477	0	86.8	582	2.55	2.66			
March	517	0	126	434	1.90	2.19			
April	924	0	439	1,021	4.48	5.00			
May	731	0	343	498	2.18	2.51			
June	683	0	379	362	1.59	1.77			
July	824	0	309	196	.860	.99			
August	857	0	317	76.7	.336	.39			
September	873	0	424	3.90	.017	.02			
The year	924	0	242	356	1.56	21.21			

Bushkill Creek at Shoemakers, Pa.

Location. - Chain gage, lat. 41°05'15", long. 75°02'20", at highway bridge three-quarters of a mile northwest of Shoemakers, Monroe County, and 2 miles southwest of Bushkill. Zero of gage is 421.13 feet above mean sea level.

Drainage area. - 117 square miles.

Drainage area. - 117 square miles.

Records available. - October 1918 to September 1920, October 1931 to September 1937

in reports of U. S. Geological Survey; September 1908 to September 1937 in reports of Pennsylvania Department of Forests and Waters.

Average discharge. -25 years (1908-16, 1920-37), 235 second-feet.

Extremes. - Maximum discharge during year, 1,240 second-feet Apr. 6 (gage height, 3.9 feet, from graph based on gage readings); minimum gage height, 1.06 feet Dec. 1 (affected by ice, discharge not determined).

1908-37: Maximum discharge, 3,910 second-feet July 24, 1920 (gage height, 7.2 feet, from graph based on gage readings), from rating curve extended above 1,600 second-feet; minimum, 4 second-feet Sept. 21, 26, 1932 (gage height, 0.90 foot).

Remarks. - Records fair. Discharge for periods of ice effect, Nov. 28 to Dec. 11, Feb. 11-13, determined from gage heights, weather records, one discharge measurement, and by comparison with records for stations in adjacent drainage areas. Discharge for high stages determined from graphs based on twice-daily gage readings. Some regulation at low stages from operation of mills upstream.

Daily and monthly discharge, in second-feet, 1936-37

Day	Oot.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	76	27	14	366	570	321	252	400	124	382	47	3.50
2	69	27	35	291	480	313	264	366	121	339	42	152
3	42	27	120	370	357	300	275	330	114	317		131
4	29	36	110	375	339	287	268	300	172	287	38	114
5	22	105.	100	304	308	279	282	283	136	238	36 34	159 152
6	19	103	90	287	271	004						102
7	17	89	200	308	260	264	975	279	129	207	31	164
8	15	80	190	313		230	942	271	494	178	37	139
9	15	93	180	344	252	213	780	244	540	158	42	119
10	16	80	170		256	197	690	230	452	134	35	95
10		80	170	370	285	172	690	216	339	119	34	81
11	17	68	220	362	220	169	600	197	287	105	112	00
12	17	58	400	317	200	144	540	178	234	142	227	80
13	17	56	321	287	200	155	452	169	200	124	164	80
14	15	48	287	271	279	147	400	264	197	110		91
15	15	46	275	400	296	152	400	600	191	147	117 81	119 99
16	17	46	234	400	000						01	99
17	54	46	521	400	260	164	425	510	164	175	68	81
18	91	46		339	210	155	362	400	139	144	60	80
19	76	42	271	540	197	147	334	366	169	119	66	83
	64	54	227	540	172	144	317	344	210	97	56	80
os	0-3	0%	727	480	175	142	275	313	175	89	48	76
21	54	39	660	452	184	268	297	283	193	78	47	
22	44	35	540	698	831	260	630	260	540	71	43	68
25	41	27	452	780	780	248	630	248	348		72	62
24	37	46	375	690	690	241	570	220	260	66	758	57
85	34	52	330	910	630	344	510	197	207	73 63	540 354	54 51
85	36	44	321	878	510		400					01
27	37	34	304	750		330	425	184	172	60	248	48
85	51	28	287	660	452	283	510	172	149	58	244	46
29	31	22	264		375	256	570	194	169	50	348	48
30	31	18	241	570		252	510	172	169	47	256	46
31	31	10	283	540 540		238 248	452	155	160	43	207	45
						240		134		50	175	
		Mon				zipun	Minimus	1	lean	Per squar		off in
Dato	ber				•	91 105	15 18		35.8	0.306		.35
Dece	mber					727	14		50.7	.433		.48
Janu	ary			· · · · · · · · · · · ·		910	271		276	2.36		.72
Pebr	uary				•	831			475	4.06		.68
Maro	h			• • • • • • • • • • •		344	172		358	3.06		.19
Apri	1			• • • • • • • • • •		975	142		228	1.95		. 25
Kav				• • • • • • • • • • •		600	252		488	4.17		.65
							134		274	2.34		.70
June				• • • • • • • • • • • • • • • • • • • •	•	540	114		232	1.98		.21
June		• • • • • • • • •		• • • • • • • • • •	•	382 758	45	1	138	1.18		.36
June	at					7 10 10	31		140			•
June July Lugu	st								148	1.26		.45
June July Lugu	ember	• • • • • • • •		• • • • • • • • • • • • • • • • • • • •		975	45		89.3	.763		.45 .85

McMichaels Creek at Stroudsburg, Pa.

Location. - Chain gage, lat. 40°58'40", long. 75°12'30", at railroad bridge at WIIKes-Barre and Eastern Railroad car shops three-quarters of a mile southwest of Stroudsburg, Monroe County. Zero of gage is 403.92 feet above mean sea

Drainage area. - 64.4 square miles. Records available. - October 1920 to September 1921, October 1931 to September 1937 in reports of U. S. Geological Survey; August 1911 to September 1937 in reports

of Pennsylvania Department of Forests and Waters.

Average discharge. 24 years (1911-18, 1920-37), 121 second-feet.

Extremes. Maximum discharge during year, 1,300 second-feet Feb. 22 (gage height, 6.3 feet, from graph based on gage readings), from rating curve extended above 800 second-feet; minimum gage height, 2.40 feet Dec. 1 (affected by ice, discharge not determined)

discharge not determined).

discharge not determined).

1911-37: Maximum discharge, 4,670 second-feet Mar. 12, 1936 (gage height, 10.5 feet, from floodmarks), from rating curve extended above 800 second-feet; minimum, 7.2 second-feet Nov. 30, 1930 (gage height, 2.34 feet); minimum daily discharge, 9.0 second-feet Nov. 30, 1930.

Remarks.- Records fair. Discharge for period of ice effect, Nov. 29 to Dec. 2, determined from gage heights, weather records, and by comparison with records for stations in adjacent drainage areas. Discharge for high stages determined from graphs based on twice-daily gage readings. Regulation at low stages from from graphs based on twice-daily gage readings. Regulation at low stages from operation of power plants upstream.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July A	ug.	Sept.
			77	180	337	156	123	268	68	146	32	111
1	77	24	13			151	119	233	65	64	34	121
2	32	22	25	148	243	141	111	209	67	61	29	102
2 3	21	25	128	260	221	7.47	110	188	76	53	29	95
4	19	38	65	188	221	137	110	174	64	48	33	108
5	20	74	50	172	186	139	119	174	0-4	40		
	22	41	51	158	174	130	675	169	62	48	32	93
6			196	200	164	117	320	169	77	44	128	83 78
7	19	36		209	154	110	281	146	64	44	52	78
8	21	36	121	186	164	110	304	139	57	41	49	74
9	23	36	82		104	93	265	132	62	41	42	71
10	24	40	74	215	158	93	200	102				
			300	197	137	95	215	117	64	38	86	70
11	22	35	168		115	92	194	110	55	48	183	68
12	25	35	224	186	115	90	180	108	52	42	152	68
13	19	29	161	172	115	90	172	137	68	40	92	74
14	18	30	134	172	196		209	194	60	83	78	61
15	18	29	117	389	158	95	209	194	00			
			109	255	134	93	186	126	50	70	65	57
16	22	28	244	227	119	86	156	121	49	80	58	6:1
17	38	27	300	444	111	88	146	113	76	48	60	58
18	50	27	128		110	88	137	111	97	49	58	54
19	35	24	119	320		97	128	108	65	44	53	54
20	28	27	836	287	108	91	120					
•	27	29	425	304	131	248	211	98	85	43	50	5
21	26	26	304	539	845	215	425	95	178	40	60	2
22	20	25	218	539	407	203	320	93	74	41	765	4
23	25		186	425	337	169	271	86	61	38	462	4
24	26	23		749	281	203	249	85	58	35	320	4
25	21	28	169	123	201	200					0.45	
26	24	30	156	559	218	188	252	82	54	40	243 236	4
	28	26	141	444	203	166	520	80	52		177	4
27	26	20	137	372	172	177	444	92	55	32		4
28	20	16	119	337		148	354	83	58	32	154	4
29	24	14	111	287		137	304	77	66	35	146	4
30	27	1.5	184	304		130		74		36	126	
31	22		184	304						Per squar	Rus	a-off is
		Mo	nth		M	aximum	Minim	um	Mean	mile		nohes
									06 77	0 415		0.48

	00	184	304	130		7-	-	
31	22	Month		Maximum	Minimum	Mean	Per square mile	Run-off in inches
Novel Decei Janu Febr Marci Apri May. June July Augu	ber mber mber ary uary h			77 74 836 749 845 248 675 268 178 146 765	18 14 13 148 110 86 110 74 49 32 29 42	26.7 30.0 168 304 211 135 250 130 68.0 49.9 132 67.1	0.415 .466 2.61 4.72 3.28 2.10 3.88 2.02 1.06 .775 2.05 1.04	0.48 .52 3.01 5.44 3.42 2.42 4.33 2.33 1.18 .89 2.36 1.16
oop				845	13	131	2.03	27.54

Lehigh River at Tannery, Pa.

Location. - Water-stage recorder, lat. 41°02'25", long. 75°45'50", 600 feet above highway bridge at Tannery, Carbon County, and 1½ miles above mouth of Black Creek. Zero of gage is 1,041.98 feet above mean sea level.

Drainage area. -322 square miles.

Records available. - October 1919 to September 1921, October 1928 to September 1937 in reports of U. S. Geological Survey; June 1914 to September 1937 in reports of Pennsylvania Department of Forests and Waters.

Average discharge. - 18 years (1914-15, 1919-26, 1927-37), 672 second-feet.

Extremes. - Maximum discharge during year, 3,400 second-feet Apr. 6 (gage height, 5.66 feet); minimum, 20 second-feet Nov. 18, 19 (gage height, 1.12 feet); minimum daily discharge, 49 second-feet Oct. 25.

1914-37: Maximum discharge, 21,800 second-feet Mar. 12, 1936 (gage height, 1.3.34 feet); minimum, 0.9 second-foot Sept. 28, 1936 (gage height, 1.07 feet); minimum daily discharge, 7.2 second-feet Aug. 5, 1936.

Remarks. - Records fair. Regulation from operation of power plants upstream.

Daily and monthly discharge, in second-feet, 1936-37

4

Day	Oot.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	304	67	175	861	1,130	832	831	1,150	342	439	170	306
2	158	74	115	772	969	750	907	992	331	490	106	285
3	115	83	198	765	844	707	922	884	326	472	112	285
4	133	98	238	802	839	707	876	892	363	442	105	342
5	148	539	227	714	758	984	854	930	402	363	99	391
6	128	397	214	672	750	945	2,600	899	358	311	105	466
7	211	295	456	611	729	809	2,730	1,290	402	271	151	385
8	326	266	515	645	645	765	1,950	1,020	396	242	199	316 271
9	285	266	414	693	701	714	1,770	861	336	220	194	238
10	252	238	414	750	930	611	1,720	736	306			
11	229	212	731	772	773	624	1,460	666	306 271	194 390	419 515	216 203
12	194	201	1,290	700	750	591. 578	1,290	629	252	374	414	199
13	155	178	1,070	645 631	666 805	559	1,100	1,460	266	311	316	233
14	147 159	174 158	839 729	1,040	945	565	1,370	1,770	290	336	247	221
	123	178	624	1,290	854	585	1,410	1,500	266	431	203	202
16	87	128	686	1,040	707	578	1,230	1,410	238	460	170	207
17	181	147	666	1,330	666	559	1,110	1,330	300	374	188	238
18	200	157	686	1,330	652	546	1,020	1,170	552	316	207	233
20	160	188	1,100	1,120	585	534	938	984	472	266	174	229
21	112	138	1,140	1,040	598	709	972	772	425	238	155	238
22	102	145	914	1,630	2,390	854	1,820	714	1,160	216	305	261
23	99	174	775	1,900	2,130	884	2,080	686	884	212	1,210	238
24	82	123	700	1,640	1,640	922	1,640	618	598	233	984	220
25	49	156	605	2,430	1,290	1,060	1,330	552	442	233	729	203
26	120	173	578	2,230	1,060	1,100	1,130	454	358	203	552	163
27	118	175	585	1,680	969	961	1,460	425	300	190	615	147
28	87	199	631	1,370	839	869	1,820	478	321	182	700	139
29	79	119	618	1,230		772	1,720	484	391	175	534	147
30	105	177.	578	1,080		743	1,410	419	342	174	425	140
31	102		643	1,060		794		374		199	358	
		Mor	ith		Ma	ximum	Minimu	m	Mean	Per squa		-off in
Ooto	ober					326	49		153	0.475		0.55
						539	67		187	.581		.65 2.21
						,290	115		618	1.92		3.98
						,430	611	1	,112	3.45 2.95		3.07
						,390	585		950 749	2.33		2.69
						,100	534 831	,		4.42		4.93
					2	730	374		876	2.72		3.14
				• • • • • • • •	. 1	,770 ,160	238		400	1.24		1.38
						490	174		295	.916		1.06
					1 -	,210	99		350	1.09		1.26
						466	139		245	.761		.85
	The ve	ar				2,730	49		611	1.90		25.77

Lehigh River at Bethlehem, Pa.

Location. - Water-stage recorder, lat. 40°22'05", long. 75°21'55", 1,500 feet above

Minsi Trail Bridge, Bethlehem, Northampton County, and 2,000 feet below mouth
of Monocacy Creek. Zero of gage is 208.50 feet above mean sea level.

Brainage area. - 1,280 square miles.

Records available. - September 1902 to February 1905, April 1909 to December 1913,
October 1918 to September 1921, October 1928 to September 1937 in reports of
U. S. Geological Survey; September 1902 to February 1905, April 1909 to
September 1937 in reports of Pennsylvania Department of Forests and Waters.
Records prior to October 1928 obtained at New Street Bridge 2,800 feet upstream.
Extremes. - Maximum discharge during year, 10,500 second-feet Feb. 22 (gage height,
6,24 feet); minimum, 330 second-feet Nov. 1 (gage height, 2.09 feet); minimum
daily discharge, 417 second-feet Nov. 1, 29.

1902-5, 1909-37: Maximum discharge, 64,800 second-feet Aug.24, 1933
(gage height, 18.70 feet); minimum, 160 second-feet Oct. 15, 1910 (gage height,
1.33 feet, former site and datum).

Maximum stage known, 25.9 feet, former site and datum, Feb. 28, 1902 (discharge, about 92,000 second-feet).

Extremes do not include flow of Lehigh Canal.

Remarks. - Records good. Regulation from power operations upstream. Daily and
monthly records include flow of Lehigh Canal.

Daily and monthly discharge, in second-feet, 1936-37

ay	Oot.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
		170	445	7 470	5,620	2,960	2,280	4,880	1,410	1,500	858	1,580
1	964	438	445	3,470 2,960	4,440	2,720	2,280	4,300	1,350	1,500	809	1,500
2	999	504	645	3,470	3,600	2,490	2,280	3,890	1,310	1,410	701	1,380
3	674	460	1,480	3,600	3,210	2,380	2,170	3,480	1,420	1.350	655	1,330
5	501 531	528 970	1,280	3,210	3,210	2,490	2,130	3,350	1,410	1,240	642	1,370
	522	1,430	1,050	2,840	2,960	2,720	6,930	3,360	1,310	1,190	633 863	1,470
6 7	522	1,030	3,100	2,960	2,720	2,490	8,750	3,620	1,310	1,100	926	1,300
8	557	939	2,260	3,340	2,600	2,220	6,570	3,360	1,300	995	914	1,170
9	683	937	1,820	2,960	2,600 3,080	2,130	5,620 5,780	2,860 2,620	1,230	872	820	
10	720	901	1,660	3,210						848	1,410	
11	709	793	2,100	3,880	2,720	1,860	4,870	2,300	1,240	1,080	3,700	982
12	663	745	4,290	3,600	2,240	1,740	4,290	2,170	1,150	1,080	3,060	1,030
13	578	722	3,740	3,340	2,200	1,700	3,740	2,110	1,040	1,020	1,900	
14 15	519 507	699 676	2,840 2,380	2,960	2,630 3,340	1,670	3,470 3,760	3,020 4,310	1,210	1,560	1,480	
10							4 370	* 000	1,100	1,620	1,280	917
16	598	685	2,110	5,320	2,720	1,700	4,170	5,900 3,490	1,060	1,950	1,120	
17	696	652	2,900	4,720	2,380	1,640	3,630	3,360	1,240	1,590	1,040	
18	818	654	2,600	5,940	2,180	1,670	3,240	2,980	1,730	1,330	1,020	917
19	758	616 543	2,170 6,870	5,940 5,320	2,060	1,640	2,980	2,740	1,630	1,150	990	
20	700	545						2,400	1,500	1,040	904	892
21	628	661	7,060	4,870	1,920	2,650	2,610 5,450	2,170	3,770	970	1,220	868
22	570	605	5,170	6,040	7,220	3,740	7,060	2,150	2,920	907	5,970	892
23	533	580	3,880	8,230	8,400	3,210	6,090	2,010	2,150	895	5.89) 858
24	513 468	615 591	3,210 2,840	7,560 9,280	6,570 5,320	3,340	5,180	1,830	1,700	884	3,90	808
				10,100	4,290	3,740	4,590	1,720	1,470	1,140	2,86	773
26	500	525	2,490	8,230	3,880	3,210	5,790	1,710	1,330	977	2,74	771
27	487	615 488	2,260	6,570	3,340	2,960	6,580	1,690	1,350	832	2,74	736
28	522	434	2,210	5,620	3,010	2,720	6,580	1,740	1,350	774	2,20	748
29	510 465	535	1,970	5,020		2,380	5,790	1,570	1,350	750 763	1,94	0 71
31	480		2,380	4,870		2,260		1,400		Per squ		n-off in
		Mo	nth		1	(aximum	Minim	um .	Mean	mile		inches
Oat	ober					999		35	610	0.47		0.55 .60
Nos	rember					1,430		34	686	2.08		2.40
Dag	nember.					7,060			2,662 4,946	3.86		4.45
Jar	DERV					10,100	2,8			2.77		2.88
Fel	bruary					8,400	1,9		5,551 2,428	1.90		2.19
Mas	roh					3,740	1,6		4.580	3.58		3.99
An	ril					8,750	2,1		2,792	2.18		2.51
Ma	v					4,880	1,4		1,501	1.1		1.30
-	ne					3,770		50	1,137	.80		1.02
Ju						1,950				1.43		1.65
Ju	ly					5 070		33	1.000	1020		
Ju Ju	met					5,970 1,580		33 11	1,836 1,044	.8:		.91

The year.....

Tohickon Creek near Pipersville, Pa.

Location. - Water-stage recorder, lat. 40°26'00", long. 75°07'00", at highway bridge
limited northeast of Pipersville, Bucks County, and 4½ miles above mouth.

Zero of gage is 258.43 feet above mean sea level.

Drainage area. - 97.4 square miles.

Records available. - July 1935 to September 1937.

Extremes. - Maximum discharge during year, 3,820 second-feet Dec. 20 (gage height,
6.00 feet); minimum, 0.7 second-foot Sept. 27 (gage height, 0.56 foot).

1935-37: Maximum discharge, 7,020 second-feet June 13, 1936 (gage height,
7.60 feet), from rating curve extended above 3,600 second-feet; minimum, 0.6

second-foot Aug. 3, 1936.

Remarks. - Records good except those for periods of recorder failure. Oct. 29

Remarks. - Records good except those for periods of recorder failure, Oct. 29, Nov. 15-17, Nov. 29 to Dec. 6, Jan. 15-26, Jan. 28 to Feb. 1, Apr. 18-22, which are poor and were determined by comparison with records for stations in adjacent drainage areas. Regulation at low stages from operation of mills upstream.

Daily and monthly discharge, in second-feet, 1936-37

Day	Oot.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	7.6	1.1	1.5	313	800	61	52	114	17	19	3.4	22
2	9.9	4.0	5.0	156	202	50	47	84	15	29	9.5	17
3	6.9	2.4	55	630	116	46	42	69	11	17	4.8	13
4	1.4	5.8	40	333	105	44	38	56	22	9.6	4.8	9.7
5	7.7	5.8	33	127	68	49	37	50	10	9.8	3.8	9.0
6	7.6	8.1	30	81	66	52	262	45	3.5	9.1	3.2	12
7	1.4	11	698	281	64	45	197	52	14	7.7	1.5	12
8	4.7	4.9	151	478	55	42	98	48	9.0	5.7	1.2	8.7
8	6.1	16	97	332	61	39	116	41	7.6	7.2	8.0	9.7
10	4.4	12	52	654	89	36	223	45	8.5	4.3	3.0	7.5
11	1.1	13	254	735	72	30	117	41	8.1	1.9	11	4.5
12	3.9	6.4	540	258	69	27	82	29	6.3	14	106	1.4
13	4.0 2.5	10	188	159	46	26	63	30	4.3	4.5	114	8.1
14	2.5	6.6	90	116	69	24	53	221	19	7.0	49	4.9
15	3.1	7.0	59	750	105	27	52	898	15	8.2	22	4.9
16	3.0	8.0	50	500	82	36	61.	264	11	14	16	4.6
17	5.9	7.5	699	240	60	53	52	140	8.5	14	9.8	4.7
18	4.6	6.8	239	700	56	35	41	103	8.4	11	6.6	4.3
19	15	4.8	125	300	50	47	35	77	7.7	14	5.8	1.1
20	8.4	4.0	1,850	180	46	139	32	62	3.2	9.8	54	5.4
21	9.6	3.2	376	350	54	1,330	35	49	8.5	5.6	46	3,1
22	4.5	1.6	150	1,000	1,680	962	150	39	17	6.8	590	3.4
23	4.7	5.4	80	800	379	385	498	57	16		1,320	3.1
24	4.8	5.3	72	400	189	202	202	69	14	6.7	840	3.0
25	1.3	4.1	49	1,000	127	216	112	41	10	2.7	323	5.1
26	5.5	3.7	46	450	88	319	104	28	8.0	5.4	148	.8
27	4.4	6.6	43	216	82	143	486	30	4.6	7.7	109	4.2
28	4.5	3.2	44	140	72	106	652	67	9.1	10	90	3.6
29	3.0	2.5	40	120		83	325	42	7.3	25	74	1.2
30	5.0	2.0	35	90		68	158	27	6.6	15	43	3.0
31	.9		177	200		59		20		8.3	29	

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
Ootober	15	0.9	5.08	0.052	0.06
November	16	1,1	6.09	.063	.07
December	1,850	1.5	205	2.10	2.42
January	1,000	81	390	4.00	4.61
ebruary	1,680	46	177	1.82	1.90
arch	1,330	24	154	1.58	1.82
pril	652	32	147	1.51	1.68
lay	898	20	94.8	.973	1.12
une	22	3.2	10.3	.106	.12
Tuly	29	1.9	10.2	.105	.12
lugust	1,320	1.2	131	1.34	1.54
September	22	.8	6.50	.067	.07
The year	1,850	.8	112	1.15	15.55

Neshaminy Creek near Langhorne, Pa.

Location. - Water-stage recorder, lat. 40°10'25", long. 74°57'30", at bridge on State Highway 213 half a mile below mouth of Mill Creek and 1.7 miles west of Langhorne, Bucks County. Zero of gage is 40.57 feet above mean sea level. Drainage area. - 210 square miles.

Records available. - October 1934 to September 1937.

Extremes. - Maximum discharge during year, 5,820 second-feet Dec. 20 (gage height, 9.09 feet), from rating curve extended above 3,000 second-feet; 6.0 second-feet Sept. 24, 28 (gage height, 0.60 foot); minimum daily discharge, 8.2 second-feet

Sept. 24.

1934-37: Maximum discharge, 9,520 second-feet Jan. 3, 1936 (gage height, 12.53 feet), from rating curve extended above 3,000 second-feet; minimum, that of Sept. 24, 28, 1937; minimum daily discharge, that of Sept. 24, 1937.

Remarks.- Records good except those for period of ice effect, Dec. 1-7, and for periods of recorder failure, Jan. 6, 7, Sept. 19-22, which are poor. Discharge for period of ice effect determined from gage heights, weather records, and by comparison with records for stations in adjacent drainage areas. Discharge for periods of recorder failure determined from range limits of recorder graph and by comparison with records for stations mentioned above. Regulation from and by comparison with records for stations mentioned above. Regulation from power operations upstream.

Day	Oot.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July A	ug.	Sept.
1	154	19	16	482	1,230	217	179	304	86	163	27	30
2	106	20	18	231	481	217	166	269	81	100	30	31
3	56	23	55	745	312	203	159	242	76	59	21	25
	36	17	40	579	320	192	146	220	83	49	22	25
5	29	23	33	272	312	196	137	203	81	45	21	23
6	25	23	30	210	280	189	559	192	81	53	20	36
7	23	27	700	480	261	175	390	190	92	50	19	34
8	20	29	246	871	253	169	217	175	71	49	27	34
9	28	34	117	471	261	189	217	172	78	44	24	29
10	29	33	94	570	288	166	292	162	113	38	20	22
11	20	35	105	1,400	253	146	224	150	117	102	21	19
12	27	32	688	471	210	137	189	134	94	222	71	18
13	25	26	255	366	210	140	172	149	76	86	108	18
14	18	23	153	300	269	143	159	550	66	55	52	26
15	20	23	119	953	276	165	162	1,140	61	51	39	17
16	16	25	102	916	220	235	166	336	57	113	32	14
17	57	23	1.880	416	203	235	150	246	51	73	26	16
18	69	19	1,880	1,460	203	276	137	228	69	51	22	22
19	62	19	213	662	192	386	137	196	76	44	25	18
20	49	19	3,520	452	189	701	128	175	64	39	17	25
21	29	17	614	871	196	1,650	134	159	63	35	22	18
22	16	20	312	1,910	2,700	838	506	143	167	33	68	14
23	26	21	213	1,830	597	420	528	140	78	29	70	12
24	22	25	189	874	402	320	272	150	59	59	73	8.1
25	21	20	175	2,040	337	320	206	140	53	72	73	13
26	20	21	166	899	276	433	231	116	46	73	56	10
27	24	23	153	560	284	280	2,340	122	44	69	57	8.
28	24	20	150	447	235	250	810	137	52	51	50	8.
29	21	20	134	411		220	525	131	57	41	43	14
30	27	18	122	380		190	380	102	44	32	41	17
31	20		207	731		182		91		27	37	

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	154	16	36.1	0.172	0.20
November	35	17	23.2	.110	.12
and the second s	3,520	16	362	1.72	1.98
December	2,040	210	750	3.57	4.11
January	2,700	189	402	1.91	1.99
February	1,650	137	309	1.47	1.70
March	2,340	128	334	1.59	1.77
April	1,140	91	221	1.05	1.21
May	167	44	74.5	.355	.40
June		27	64.7	308	.36
July	222	17	39.8	.190	.22
August	108			.096	.11
September	36	8.2	20.2	.090	• 4.4
The year	3,520	8.2	219	1.04	14.17

DELAWARE RIVER BASIN

Schuylkill River at Pottstown, Pa.

Location. - Water-stage recorder, lat. 40°14'30", long. 75°39'05", at Hanover Street Bridge, Pottstown, Montgomery County, a third of a mile below mouth of Manatawny Creek. Zero of gage is 117.81 feet above mean sea level.

Drainage area. - 1,147 square miles.

Records available. - October 1931 to September 1937 in reports of U. S. Geological Survey; August 1927 to September 1937 in reports of Pennsylvania Department of Forests and Waters.

of Forests and Waters.

Average discharge. - 10 years, 1,818 second-feet.

Extremes. - Maximum discharge during year, 9,460 second-feet Feb. 22 (gage height, 7.05 feet); minimum, 265 second-feet Nov. 29 (gage height, 0.99 foot); minimum daily discharge, 331 second-feet Nov. 29.

1927-37: Maximum discharge, 44,200 second-feet Aug. 24, 1933 (gage height, 19.2 feet), from rating curve extended above 15,000 second-feet; minimum, 87 second-feet Aug. 13, 1930 (gage height, 0.43 foot); minimum, daily discharge, 175 second-feet Sept. 19, 1932.

Remarks. - Records good. Discharge for periods of faulty gage record, Nov. 9-12, May 30 to June 2, June 11, 27, 29, determined from partial gage graph and by comparison with records for stations in adjacent drainage areas. Regulation

comparison with records for stations in adjacent drainage areas. Regulation at low stages from operation of mills upstream.

Daily and monthly discharge, in second-feet, 1936-37

Day	Oot.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug		Sept.
1 2	802 784	434 441	434 474	2,920 2,570	4,540	2,370 2,240	1,750 1,640	3,940 3,370	1,190	1,100	7	84 69	1,640
3	541	454	1,670	2,920	2,850	2,110	1,580	3,000	1,120	876		41	1,420
4	428	506	1,320	3,070	2,710	1,990	1,480	2,640	1,200	818		98	1,340
5	403	626	887	2,570	2,570	1,990	1,410	2,440	1,150	761	5	50	1,280
6	372	920	800	2,300	2,440	1,870	2,700	2,300	1,040	980		24	1,400
7	390	676	2,900	2,570	2,240	1,750	3,770	2,370	980	810		44	1,280
8	493 473	632	2,010	3,070	2,110	1,640	2,920	2,110	850	692	1,3	00	1,170
10	493	690 620	1,420	2,640 3,180	2,110	1,580	2,780 3,070	2,240	777 801	626 598	1,1	35	1,110
10		020	1,250	3,100	2,500	1,450	3,010	2,050		390			1,000
11	493	600	1,750	4,100	2,110	1,400	2,570	1,870	1,020	550		76	1,030
12	500 428	620	2,840	3,690	1,750	1,370	2,300	1,510	867	550	3,0	50	989
13	397	527	2,410	3,300	1,700	1,340	2,110	1,420	754 723	557	3,5		971
14	397	5 4 8 527	2,270	2,920 3,270	2,220 2,850	1,340	2,050	1,750 2,110	754	530 738	2,5	70	962
10		521		3,210	2,000		2,110	2,110	704				
16	422	513	1,750	4,020	2,500	1,410	2,180	1,700	730	953	1,5		892
17	534	487	2,840	3,370	2,300	1,300	1,930	1,580	677	818	1,3		769
18	640	487	2,550	4,720	2,050	1,380	1,700	1,750	834	677	1,2		793
19	575	467	2,150	4,540	1,930	1,510	1,700	1,700	1,240	626	1,1	90	761
20	480	434	6,360	4,190	1,810	1,880	1,580	1,640	1,290	564	1,1	70	723
21	460	493	6,000	4,190	1;810	3,040	1,580	1,530	962	530	1,0		677
22	454	454	4,280	4.720	6,910	3,450	3,360	1,310	1,450	518	1,3		670
23	454	434	3,220	6,440	6,850	3,070	4,540	1,580	1,620	584	3,2		634
24	473	441	2,640	6,240	5,080	2,780	3,770	1,520	1,220	857	3,6	20	619
25	480	467	2,300	7,270	4,190	2,710	3,370	1,400	1,070	816	2,4	40	612
26	480	467	2,050	7,060	3,450	2,920	3,220	1,330	989	930	1,8	10	564
27	493	454	1,870	5,840	3,070	2,440	5,840	1,520	953	1,020	1,9	30	550
28	473	384	1,750	4,720	2,710	2,240	5,840	1,700	953	700	2,4		557
29	460	331	1,580	4,100		2,050	5,650	1,510	989	584	1,9	30	564
30	434 422	434	1,440	3,610		1,930	4,900	1,350	944	557 694	1,8	10	550
-			2,000	0,1.0		1,520		1				-	off in
		Mon	th		M	aximum	Minimu	um I	Mean	Per squantile	are		nches
Ooto	ber					802	3	72	488	0.425			0.49
Nove	mber				!	920		31	519	.452			.50
						3,360			,219	1.93			2.22
						7,270	2,3		,996	3.48			4.01
						5,910	1,7		958	2.58			2.69
						5,450 5,840	1,3		.992 .847	2.48			2.01 2.77
						3,940	1.2		.919	1.67			1.92
						1,620			,011	.881			.98
						1,100		18	729	.636			.73
						620			598	1.39			1.60
						1,640		50	936	.816			.91
						-							

1.54

The year....

Schuylkill River at Philadelphia, Pa.

Location. - Water-stage recorder, lat. 39°58'00", long. 75°11'20", just above Fairmount Dam, Philadel phia, Philadelphia County. Zero of gage is at 0.00 foot elevation, city of Philadelphia datum, or 5.23 feet above mean sea level, Sandy Hook datum.

Drainage area. - 1,893 square miles. Records available. - January 1898 to December 1912, September 1931 to September 1937 in reports of U. S. Geological Survey; January 1903 to December 1912, September 1931 to September 1937 in reports of Pennsylvania Department of Forests and

Waters.

Average discharge. - 15 years (1903-12, 1931-37), 2,573 second-feet.

Extremes. - Maximum discharge during year, 17,100 second-feet Dec. 20 (gage height, 8.60 feet); minimum, 16 second-feet Oct. 31 (gage height, 5.50 feet); minimum daily discharge, 158 second-feet Dec. 1.

1898-1912, 1931-37: Maximum gage height, about 14.8 feet Mar. 1, 1902 (discharge not determined); no flow over dam at times; minimum daily discharge, 38 second-feet Sept. 20, 1932.

Remarks. - Records good except those for periods plugged intake or recorder failure, Oct. 1-30, Dec. 25-27, Jan. 15, 16, 26, June 1-25, Aug. 9 to Sept. 30, which are poor and were determined by comparison with records for stations upstream.

Regulation from storage reservoirs upstream. Water supply for city of Philadel-Regulation from storage reservoirs upstream. Water supply for city of Philadelphia diverted above station not included in records except in part of monthly table. Record of diversion furnished by city of Philadelphia.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	500	222	158	3,350	8,440	3,320	2,270	5,700	1,140	1,700	564	1,470
2	750	277	446	3,660	5,820	3,000	2,120	4,840	1,080	1,230	701	1,360
3	780	263	837	4,160	4,320	2,780	1,980	4,210	1,030	904	561	1,310
4	470	276	2,100	5,300	3,880	2,530	1,790	3,660	1,080	733	411	1,210
5	280	396	1,110	3,820	3,710	2,480	1,700	3,220	1,030	702	306	1,130
6	220	546	930	3,160	3,490	2,420	2,550	3,000	1,110	1,070	380	1,370
7	190	760	4,670	3,270	3,220	2,220	5,410	3,320	950	1,100	820	1,260
8	360	520	3,820	5.530	3,000	2,120	3,930	2,890	770	706	1,420	1,080
9	350	558	1,980	4.490	2,950	1,980	3,380	2.730	620	567	1,130	990
10	330	626	1,440	4,270	3,160	1,880	3,930	2,730	770	414	880	930
n	320	470	1,460	8,620	3,320	1,650	3,600	2,420	870	440	766	880
12	340	424	5,040	5,820	2,530	1,610	3,050	2,080	790	429	935	830
13	280	369	3,760	4,950	2,220	1,570	2,680	1,750	800	402	3,160	840
14	210	362	2,780	4,210	2,320	1,520	2,480	2,780	670	384	3,380	820
15	200	318	2,420	4,270	3,880	1,740	2,370	5,120	620	457	2,120	840
16	. 250	402	2,080	5,880	3,540	1,840	2,580	3,320	590	831	1,610	780
17	470	337	6,640	5,120	3,110	1,650	2,370	2,370	590	893	1,310	620
18	500	312	4,440	8,320	2,840	1,650	2,120	2,270	750	652	1,080	640
19	560	220	2,890	7,180	2,530	1,880	1,980	2,270	1,230	515	897	570
20	420	264	11,500	5,990	2,420	2,840	1,850	2,120	1,210	454	831	530
21	310	266	9,450	6,460	2,270	6,130	1,790	1,980	950	420	826	510
22	280	302	6,350	8,980	11,000	7,360	3,620	1,740	1,320	350	1,440	470
23	290	287	4,550	11,900	10,500	5,120	6,640	1,650	1,510	376	2,060	430
24	300	282	3,490	9,800	7,540	4,270	5,410	1,880	1,320	535	4,440	410
25	290	258	2,950	11,600	6,110	3,880	4,440	1,700	1,070	660	3,710	390
26	340	284	2,500	10,500	5,070	4,440	4,160	1,480	881	796	2,420	330
27	310	281	2,220	8,440	4,320	3,820	4,440	1,580	816	1,450	1,790	360
28	300	232	2,120	6,940	3,820	3,160	9,100	2,480	912	968	1,880	370
29	260	167	1,930	5,990		2,890	8,380	1,930	920	532	2,220	380
30	250	217	1,650	5,410		2,580	6,940	1.570	888	406	1,740	360
31	190		1,740	5,300		2,420		1,400		410	1,570	

31 190	1,740	0,000	2,420	1 - ,	100	120 -	,0.0
		Observed		Diversion	Corre	cted for dive	rsion
Month	Maximum	Minimum	Mean	(Mean)	Mean	Per square mile	Run-off in inches
October	780	190	352	243	595	0.314	0.36
November	760	167	350	253	603	.319	.36
December	11,500	158	3,208	257	3,465	1.83	2.11
January	11,900	3,160	6,216	258	6,474	3.42	3.94
February	11,000	2,220	4,333	257	4,590	2.42	2.52
March	7,360	1,520	2,863	272	3,135	1.66	1.91
April	9,440	1,700	3,802	249	4,051	2.14	2.39
May	5,700	1,400	2,651	244	2,895	1.53	1.76
June	1,510	590	943	270	1,213	.641	.72
July	1,700	350	693	275	968	.511	.59
August	4,440	306	1,528	272	1,800	.951	1.10
September	1,470	330	782	270	1,052	.556	.64
The year	11,900	158	2,303	260	2,563	1.35	18.40

Little Schuylkill River at Tamaqua, Pa.

Location. - Water-stage recorder, lat. 40°48'20", long. 75°58'20", at Panther Valley Water Co. pumping plant, 0.6 mile above Tamaqua, Schuylkill County, and 0.8 mile above mouth of Panther Creek. Zero of gage is 817.46 feet above mean sea level.

above mouth of Panther Creek. Zero of gage is 817.46 feet above mean sea level.

Drainage area. - 42.9 square miles.

Records available. - October 1919 to September 1921, October 1931 to September 1937

In reports of U. S. Geological Survey; June 1916 to September 1937 in reports of Pennsylvania Department of Forests and Waters. Records prior to Oct. 1, 1928, obtained at a site 0.6 mile downstream.

Average discharge. - 19 years (1916-17, 1919-37), 92.7 second-feet.

Extremes. - Maximum discharge during year, 1,060 second-feet Feb. 22 (gage height, 4.58 feet); minimum, 9.3 second-feet Oct.5, 6 (gage height, 1.49 feet).

1916-37: Maximum discharge, 3,740 second-feet Aug. 24, 1933 (gage height, 7.50 feet); minimum, 1.8 second-feet Dec. 18, 1930 (gage height, 1.21 feet); minimum daily discharge, 3.0 second-feet Dec. 23, 1930.

Remarks. - Records good except those for period of ice effect, Nov. 27 to Dec. 2, for period of backwater from temporary dam, July 14 to Aug. 7, and for periods of recorder failure, Aug. 23 to Sept. 8, Sept. 27-30, which are fair. Discharge for periods of recorder failure determined from gage heights, weather records, and by comparison with records for stations in adjacent drainage areas. Discharge for periods of recorder failure determined by comparison with records for stations periods of recorder failure determined by comparison with records for stations mentioned above.

Daily and monthly discharge, in second-feet, 1936-37

Day	Oot.	Nov.	Deo.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	36	14	17	98	142	96	68	164	32	28	17	27
	17	13	40	91	107	85	68	144	31	23	15	25
2 3	10	16	85	125	110	78	65	126	32	24	15	25
4	īī	34	40	107	107	74	60	114	37	19	13	29
5	11 9.5	98	37	98	96	81	59	98	29	19	12	25 29 35
6	9.6	51	54	93	8.7	70	232	102	27	21	12	45
7	9.6	53	130	111	83	65	176	96	29	20	130	37
8	9.9	51	85	114	78	60	161	74	26	18	81	34
9	10	53	74	102	87	56	164	64	25	18	85	32
10	14	46	98	117	89	52	147	68	30	19	60	30
11	16	41	173	118	70	48	128	65	27	27	70	30
12	11	38	176	118	65	47	114	59	24	25	63	3:
13	11	37	156	111	60	44	104	59	22	18	66	30
14	10	34	136	107	99	46	100	76	27	18	54	29
15	9.9	36	116	177	81	47	111	68	26	32	47	26
16	10	31	108	150	74	44	98	59	22	39	41	23
17	26	30	140	155	68	43	85	59	22	31	. 39	2
18	26	29	96	224	64	41	85	57	27	22	34	21
19	17	41	97	191	59	40	80	54	26	20	31	23
20	15	27	450	182	56	48	74	48	21	18	28	21
21	15	27	245	179	72	77	83	46	31	17	34	20
22	13	26	191	256	499	87	207	43	56	16	137	20
23	14	24	156	290	274	89	188	46	26	18	90	20
24	14	26	131	282	220	89	179	43	21	18	65	1
25	13	24	116	341	179	100	161	38	20	18	45	10
26	14	23	102	309	147	102	144	40	23	18	35	1
27	14	22	93	249	126	93	176	42	23	15	70	20
28	13	20	83	210	109	89	223	48	26	13	55	1
29	13	20	74	179		83	204	45	25	13	42	2
30	14	17	68	153		80	182	38	23	13	35	19
31	14		113	159		74		34		23	30	

		Observed		Diversion	Corrected for diversion				
Month	Maximum	Minimum	Mean	(Mean)	Mean	Per square mile	Run-off in		
October	36	9.5	14.2	11.1	25.3	0.590	0.68		
November	98	13	33.4	14.7	48.1	1.12	1.25		
December	450	17	119	11.7	131	3.05	3.52		
January	341	91 56	168	10.5	178	4.15	4.78		
February	499	56	118	7.95	126	2.94	3.06		
March	102	40	68.6	15.0	83.6	1.95	2.25		
April	232	59	131	21.2	152	3.54	3.95		
May	164	34	68.2	16.0	84.2	1.96	2.26		
June	56	20	27.2	9.18	36.4	.848			
July	39	13	20.7	5.69	26.4	.615	.95 .71		
August	137	12	50.0	5.28	55.3	1.29	1.49		
September	45	13 12 15	25.7	13.4	39.1	.911	1.02		
The year	499	9.5	70.1	11.8	81.9	1.91	25.92		

Perkiomen Creek at Graters Ford, Pa.

Location. - Water-stage recorder, lat. 40°13'45", long. 75°27'10", 1,650 feet above highway bridge at Graters Ford, Montgomery County, and 2½ miles north of Collegeville. Zero of gage is 112.37 feet above mean sea level.

Drainage area. - 279 square miles.

Records available. - October 1931 to September 1937 in reports of U. S. Geological Survey; June 1914 to September 1937 in reports of Pennsylvania Department of Forests and Waters

of Forests and Waters.

Average discharge. - 13 years (1914-16, 1926-37), 413 second-feet.

Extremes. - Maximum discharge during year, 6,770 second-feet Feb. 22 (gage height, 7.33 feet); minimum, 9.5 second-feet Sept. 23 (gage height, 0.88 foot); minimum daily discharge, 29 second-feet Sept. 28.

1914-37: Maximum discharge, 41,200 second-feet July 9, 1935 (gage height, 18.26 feet), from rating curve extended above 12,000 second-feet; minimum, that of Sept. 23, 1937; minimum daily discharge, 11 second-feet Sept. 18, 25, 1932.

Remarks. - Records fair. Some regulation from operation of mills upstream.

Daily and monthly discharge, in second-feet, 1936-37

Day	Oot.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	157	36	35	728	1,300	242	208	401	94	194	65	88
2	126	43	40	354	538	216	196	319	85	122	73	75
3	70	37	300	1,240	328	204	175	277	76	78	59	70
4	50	44	150	698	348	192	154	234	87	61	52	59
5	42	71	90	368	272	216	154	212	84	58	52	67
6	41	99	100	264	248	200	494	223	226	74	51	103
7	36	70	1,300	796	230	175	380	267	67	80	130	92
8	41	61	475	1,080	221	164	234	196	67	69	183	76
9	46	79	251	722	252	168	247	187	58	53	94	62
10	50	99	187	1,750	331	139	412	187	55	46	87	58
11	47	68	510	1,620	237	140	273	161	73	38	104	50
12	51	56	1,230	736	179	129	216	131	88	58	432	44
13	45	54	534	497	179	134	183	143	221	97	187	52
14	39	48	313	413	373	140	171	473	64	57	111	55
15	36	49	234	1,330	382	157	183	1,280	62	104	77	65
16	43	50	204	879	267	174	226	475	62	169	66	51
17	67	46	1,460	602	206	142	179	331	55	100	59	50
18	143	43	651	1,870	212	175	154	257	64	84	58	45
19	83	37	358	813	183	212	168	208	80	62	53	39
20	68	40	3,230	539	187	485	154	183	103	57	55	46
21	52	42	854	912	208	2,570	167	159	86	47	141	41
22	48	40	446	2,550	3,340	1,400	1,200	134	143	47	801	40
23	41	44	263	2,380	859	763	966	178	101	41	1,230	36
24	38	42	234	1,030	576	518	502	164	72	37	515	34
25	36	45	200	2,390	458	558	354	130	60	40	366	33
26	41	38	196	1,050	334	762	330	112	49	90	208	32
27	43	50	179	608	325	407	2,400	152	47	292	203	38
28	41	45	183	444	251	342	1,570	235	54	108	204	29
29	41	36	154	407		282	832	140	77	73	136	38
30	44	44	137	365		248	536	111	142	56	136	36
31	37		299	1,090		226		96		52	105	

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	157	36	56.2	0.201	0.23
November	99	36	51.9	.186	.21
December	3,230	35	477	1.71	1.97
January	2,550	354	985	3.53	4.07
	3,340	179	458	1.64	1.71
february	2,570	129	383	1.37	1.58
April	2,400	154	447	1.60	1.78
	1,280	96	250	.396	1.03
lay	226	47	86.7	.311	.35
June	292	37	82.1	.294	.34
July	1,230	51	196	.702	.81
August	103	29	53.5	.192	.21
The year	3.340	29	294	1.05	14.29

Water Co.

Crum Creek at Woodlyn, Pa.

Location. - Water-stage recorder, lat. 39°52'45", long. 75°21'00", at highway

bridge at Woodlyn, Delaware County, 2 miles northeast of Chester and 2½ miles
above mouth. Zero of gage is 19.58 feet above mean sea level.

Drainage area. - 33.3 square miles.

Records available. - October 1931 to September 1937 in reports of U. S. Geological

Survey; June 1931 to September 1937 in reports of Pennsylvania Department
of Forests and Waters (discontinued).

Survey; June 1931 to September 1937 in reports of Pennsylvania Department of Forests and Waters (discontinued).

Extremes. - Maximum discharge during year, 428 second-feet Feb. 22 (gage height, 3.48 feet); minimum, 0.5 second-foot Oct. 5 (gage height, 0.60 foot); minimum daily discharge, 1.0 second-foot Oct. 30, Nov. 27.

1931-37: Maximum discharge, 1,420 second-feet Aug. 23, 1933 (gage height, 1931-37: Maximum discharge, 1,420 second-feet; minimum, 0.3 second-foot Aug. 21, 1932 (gage height, 0.52 foot).

Remarks. - Records fair. Flow regulated by storage in Crum Creek Reservoir, 5 miles upstream. Water diverted from reservoir not included in records except in part of monthly table. Record of pumpage furnished by Philadelphia Suburban Water Co.

Daily and monthly discharge, in second-feet, 1936-37

Day	Oot.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
					101	28	22	38	12	14	4.2	3.8
1	27	1.9	1.3	30	75	31	38	31	12	9.3	4.1	3.5
2	4.9	1.3	3.8	15			33	29	10	7.7	3.9	3.3
3	6.4	1.5	4.2	33	38	29		27	19	7.5	3.0	2.8
4	2.6	1.9	2.5	34	10	30	19	35	14	4.2	2.3	3.3
5	1.9	2.6	1.7	14	17	46	27	35	1.3	7.6	~.0	
		0.5	5.0	11	25	27	97	45	14	32	1.9	4.3
6	20	2.5	5.9		25	27	65	26	13	20	25	2.8
7	17	2.9	21 4.9	27	28	30	36	14	8.3	9.8	5.9	3.4
8	8.2	2.7	4.9	44	20	48	42	26	6.0	7.1	2.9	3.5
9	6.2	3.3	4.1	26	34		60	34	9.4	5.2	2.4	3.3
10	5.0	2.8	3.8	26	43	28	80	34	0.1	3.2		
		3.1	5.7	55	34	19	35	20	26	4.0	3.2	2.3
11	2.7	3.1		32	13	24	31	17	19	6.5	5.0	1.9
12	5.0	2.9	7.4	18	19	28	19	31	13	7.9	3.8	3.4
13	4.3	2.9	4.8		41	31	30	75	11	5.3	2.5	4.5
14	5.2	2.9	3.8	15	34	51	32	106	13	2.7	2.1	3.3
15	3.6	2.9	3.5	48	34	91	52	100				
		0 77	3.9	61	16	78	49	42	8.1	3.5	3.2	3.0
16	3.0	2.7	7.9	27	38	39	19	38	5.4	5.3	3.7	3.2
17	17	3.1		83	13	31	19	26	27	6.1	3.1	4.4
18	5.9	2.9	4.9		19	56	33	21	18	4.1	2.6	3.9
19	4.4	2.9	7.9	56		71	24	31	28	3.7	2.2	4.4
20	16	6.3	114	61	22	1,1	2.4	01	20			
		0 77	50	111	27	115	40	18	18	3.3	2.0	3.
21	4.4	2.7	26	87	260	65	96	17	69	3.1	11	3.
22	4.1	1.5		82	88	42	66	25	24	3.1	7.6	3.0
23	3.8	1.5	7.9	63	57	35	37	23	9.6	3.2	4.3	3.9
24	2.7	1.3	3.8		54	46	32	16	6.5	3.0	4.0	2:
25	2.5	1.2	6.2	92	34	40	U.	-				
	2.7	1.1	7.6	70	54	72	55	15	5.9	5.6	5.2	2.
26	2.7	1.0	6.5	40	37	43	179	31	5.0	7.8	6.7	2.
27	2.2	1.0	12	32	22	38	92	35	10	3.0	6.9	2.
28	2.1	1.2	7.1	32	22	38	61	20	14	2.2	4.5	2.
29	1.7	1.4	7.1	29		16	44	16	9.8	2.7	5.8	2.
30	1.0	1.5	2.9	69		1 20		2.4		3.5	5.3	

30	30 1.0 31 1.5		21	66	ii		14 3.5 5.3				
				Observed		Diversion	Corrected for diversion				
	Month	Ma	ximum	Minimum	Mean	(Mean)	Mean	Per square mile	Run-off in inches		
Nove Dece Jan Feb Mar Apr May Jun Jul Aug	ober ember ember uary ruary ch il		27 6.3 114 111 260 115 179 106 69 32 25 4.5	1.0 1.0 1.3 11 10 11 19 14 5.0 2.2 1.9	6.29 2.34 11.9 45.8 44.4 41.1 47.7 30.4 15.3 6.66 4.85 3.31	13.8 14.4 14.9 14.8 14.9 14.5 14.2 14.1 14.2 13.9 14.1 14.6	20.1 16.7 26.8 60.6 59.3 55.6 61.9 44.5 29.5 20.6 19.0 17.9	0.604 .502 .805 1.82 1.78 1.67 1.86 1.34 .886 .619 .571	0.70 .56 .93 2.10 1.85 1.92 2.08 1.54 .99 .71 .66 .60		
T	he year		260	1.0	21.5	14.4	35.9	1.08	14.64		

Ridley Creek at Moylan, Pa.

Location. - Water-stage recorder, lat. 39°54'05", long. 75°23'35", at Fox Bank Bridge, at Moylan, Delaware County, 1 mile south of Media. Zero of gage is 87.36 feet above mean sea level.

Drainage area. - 31.9 square miles.

Records available. - October 1931 to September 1937 in reports of U. S. Geological Survey; August 1931 to September 1937 in reports of Pennsylvania Department

of Forests and Waters. Extremes. - Maximum discharge during year, 770 second-feet Feb. 22 (gage height, 4.10 feet), from rating curve extended above 300 second-feet; minimum, 3.0 second-feet Nov. 1, Dec. 1 (gage height, 0.53 foot); minimum daily discharge, 8.6 second-feet Nov. 23. 1931-37: Maximum discharge, 3,990 second-feet July 9, 1935 (gage height, 7.81 feet), from rating curve extended above 300 second-feet; minimum, 1.6 second-feet Oct. 2, 1932; minimum daily discharge, 3.8 second-feet Sept. 14,

Remarks. - Records good. Flow regulated by storage reservoir of Media Water Co., which diverts about 1.08 second-feet daily to supply borough of Media.

Daily and monthly discharge, in second-feet, 1936-37

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July A	ug.	Sept.
	74	12	10	40	88	37	34	43	25.	26	13	15
1	19	13	27	27	52	37	34	40	25	21	11	14
2 3	14	14	41	51	44	37	32	38	25	3.0	11	13
			41	21	44	37	32	37	34	17	12	13
4 5	14	12 18	19 17	38 28	44	38	34	35	26	25	12 9.7	13
6	12	16	25	24	42	37	91	35	25	55	11	16
7	12	15	149	53	40	34	46	38	24	23	20	14
8	17	16	32	46	43	39	39	34	22	20	12	12
9	18	20	22	32	43 45	5 8	42	36	21	18	13 17	12 12
10	18	16	20	46	50	33	44	34	19	16	17	12
11	14	14	32	63	39	34	36	32	41	17	18	11
12	14	13	64	36	35	34	34	30	26	20	18	11
13	10	13	30	32	37	35	33	36	24	15	14	14
14	14	1:3	24	29	45	36	33	81	24	15	15	14 12
15	12	1:3 12	23	75	40	42	34	84	21	22	11	12
16	13	14	20	50	38	46	34	42	18	19	9.8	11
	36	12	47	47	37	44	31	38	33	16	10	9.
17	20	13	28	98	36	52	31	34	30	15	14	13
18	16	ii	27	55	35	69	30	33	25	14	11	12
19 20	13	12	199	74	40	79	30 29	32	28	13	11	13 12 9.
21	15	14	44	132	42	100	48	30	63	16	12	10
22	15	13	31	79	307	56	87	29	41	15	35	11
23	13	8.6	26	88	65	46	48	31	21	12	35	9.
	11	12	24	63	53	42	39	29	21	13	32	9.
24 25	13	13	22	119	47	44	35	27	19	12	44	9. 9.
26	13	16	22	66	43	46	75	27	18	21	28	9.
27	14	12	22	52	43	39	173	52	20	21	56	9.
28	14	12	22 22	47	39	37	85	53	26	14	23	10
20	13	îĩ	21	47		36	58	32	23	12	16	10
29	14	13	20	44		35	48	28	24	12	19	10
30 31	12	10	36	106		36		26		16	17	
OT	12									Per square		-off i

31 12	30	100	30		50		
	Month		Maximum	Minimum	Mean	Per square mile	Run-off in inches
0-1-1			74	10	16.8	0.527	0.61
October			20	8,6	13.5	.423	.47
November			199	10	36.9	1.16	1.34
December			132	24	57.6	1.81	2.09
January			307	35	54.0	1.69	1.76
February			100	33	43.7	1.37	1.58
March			173	29	48.3	1.51	1.68
April				26	37.9	1.19	1.37
May			84	18	26.4	.828	.92
June			63		18.4	.577	.67
July			55	12	18.7	.586	.68
August			56	9.7			.41
September			16	9.0	11.6	.364	• 41
			307	8.6	31.9	1.00	13.58

Chester Creek near Chester, Pa.

Location. - Water-stage recorder, lat. 39°52'10", long. 75°24'30", at Dutton Mill Bridge, 3 miles northwest of Chester, Delaware County. Zero of gage is 23.54 feet above mean sea level.

Drainage area. - 61.1 square miles. Records available. - October 1931 to September 1937 in reports of U. S. Geological Survey; August 1931 to September 1937 in reports of Pennsylvania Department

of Forests and Waters.

Extremes. - Maximum discharge during year, 1,350 second-feet Feb. 22 (gage height, 6.14 feet), from rating curve extended above 800 second-feet; minimum, 8.4 second-feet Oct. 7 (gage height, 0.51 foot); minimum daily discharge, 18

1931-37: Maximum discharge, 4,270 second-feet Aug. 23, 1933 (gage height, 11.48 feet), from rating curve extended above 800 second-feet; minimum, 0.3 second-foot Aug. 7, 1934 (gage height, 0.28 foot); minimum daily discharge, 6.8 second-feet Sept. 11, 14, 1932.

Remarks. - Records good. Regulation from operation of mills upstream. second-feet Aug. 20.

Daily and monthly discharge, in second-feet, 1936-37

Day	Oot.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
				79	168	68	65	83	46	66	27	31
1	144	24	22		88	69	65	78	45	41	24	29
2	38	25	65	55	00	69	62	72	46	36	20	26
5	28	25	76	113	71	70	58	70	59	34	21	25
4	24	26	40	71	68	70	65	67	49	33	21	26 25 39
5	24	34	32	50	69	73	00	0,	••			
	07	29	54	46	68	68	190	68	45	116	19	38 31 27
6	23 22	26	351	108	67	64	89	67	42	53	30	31
7	22	20	62	88	76	78	72	64	42	38	29	27
8	32 33	29	42	65	82	77	87	68	40	35	25	26 24
9	33	41 34	39	92	93	63	83	68	39	32	28	24
10	33	0.3	38	02					-		37	99
22	29	28	76	127	70	64	70	61	72	31	37	22 24
11	26	25	134	71	62 1	64	65	57	55	30	38.	26
12	23	27	59	58	63	70	61	64	46	30	34	20
13	24	25	44	55	82	72	62	166	45	27	26	30
14	21	26.	40	164	73	87	67	173	52	32	23	27
15	21	20									0.7	91
20	24	25	39	98	67	100	69	81	40	32	23	23 23 23 25 24
16	72	26	98	95	65	95	60	70	41	30	19	20
17	41	20	53	221	64	112	59	64	85	28	20	20
18		03	49	112	63	159	57	62	49	26	21	23
19	31 26	28 23 24	362	190	72	153	54	59	50	26	18	24
20					-	300	95	56	47	28	19	27
21	27	25	81	296	81	189	170	54	123	25	77	21
22	24	24	55	138	542	106	95	60	46	23	107	2:
23	24	25	44	160	128	87	90		39	33	107	21 21 21 21 21 21 21 21
24	22	25	42	111	101	83	71	54	37	25	96	2
25	25	28	41	113	91	88	66	49	31	20		
	05	27	41	113	80	85	177	50	36	29	61	2 2 2 2 2 2
26	25			84	79	74	443	114	35	43	124	2
27	28	26	40	76	72	72		102	46	29	54	2
28	27	22	42	81	12	68		59	47	23	37	2
29	26	24	38			65		52	43	24	35	2
30	25	24	37 78	73 240		64		48		29	38	

31	23		78	240	64		40	20		
31		Month			Maximum	Minimum	Mean	Per square mile	Run-off in inches	
Nove Dece Janu Febr Marc Apri May June July August	ober omber				362 296 542 189 443 173 123 116 124	21 22 22 46 62 63 54 48 35 23 18 20	32.1 26.7 73.4 111 96.6 85.7 99.2 72.9 49.6 35.1 39.3 25.1	0.525 .437 1.20 1.82 1.58 1.40 1.62 1.19 .812 .574 .643 .411	0.60 .49 1.38 2.10 1.64 1.61 1.81 1.37 .91 .66 .74 .46	
aab					549	18	62.1	1.02	13.77	

Brandywine Creek at Chadds Ford, Pa.

Location. - Water-stage recorder, lat. 39°52'10", long. 75°35'35", at Pennsylvania Railroad bridge at Chadds Ford, Delaware County. Zero of gage is 150.19 feet above mean sea level.

above mean sea level.

Drainage area. - 287 square miles.

Records available. - October 1918 to September 1921, October 1931 to September 1937

in reports of U. S. Geological Survey; August 1911 to September 1937 in reports of Pennsylvania Department of Forests and Waters.

Average discharge. - 26 years, 376 second-feet.

Extremes. - Maximum discharge during year, 3,790 second-feet Feb. 22 (gage height, 7.76 feet); minimum, 65 second-feet Oct. 5 (gage height, 0.54 foot); minimum daily discharge, 107 second-feet Dec. 1.

1911-37: Maximum discharge, 30,500 second-feet Mar. 5, 1920 (gage height, 15.0 feet, from floodmark), from rating curve extended above 7,000 second-feet; minimum, 18 second-feet Jan. 22, 1931 (gage height, 0.34 foot); minimum daily discharge, 50 second-feet Sept. 11, 13, 23, 1932.

Remarks. - Records good. Regulation at low stages from operation of mills upstream.

Daily and monthly discharge, in second-feet, 1936-37

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	304	111	107	418	891	406	324	541	286	300	199	195
2	192	115	161	263	522	410	320	502	273	228	164	179
	134	120	391	433	410	403	307	475	273	199	148	167
3	115	119.	208	409	403	403	300	448	433	187	141	163
5	111	156	156	260	418	414	314	433	307	197	139	182
6	114	154	173	225	399	395	802	448	273	471	134	199
7	111	132	903	337	395	370	502	703	257	338	237	181
8	133	129	334	493	433	366	356	475	244	225	218	170
9	142	156	199	334	467	370	395	601	238	196	166	159
10	140	152	176	402	541	338	463	486	260	182	152	150
11	158	131	245	764	429	338	377	418	432	171	158	148
12	139	126	579	395	363	334	338	384	373	168	156	143
13	121	124	285	317	366	342	320	417	270	163	150	152
14	118	120	204	293	425	359	324	830	250	158	146	157
16	115	117	179	604	452	381	342	912	244	185	136	144
16	116	122	168	612	384	395	377	541	225	208	127	146
17	188	117	-851	413	374	381	328	471	225	180	127	142
18	176	113	385	945	359	429	303	418	286	168	136	147
19	140	111	251	541	348	482	338	406	257	159	134	138
20	130	111	2,150	541	388	621	303	395	238	157	124	140
21	121	115	666	830	418	869	358	363	241	159	122	135
22	118	115	345	917	2,230	720	851	348	450	154	1,020	132
23	116	122	257	983	836	486	621	645	263	151	972	132
24	115	122	231	703	601	421	425	463	213	214	515	132
25	111	124	222	1,130	541	433	363	363	202	156	482	131
26	117	120	216	777	475	444	635	342	193	172	325	124
27	126	120	210	581	459	381	2,330	567	190	439	531	126
28	122	111	210	502	433	363	1,140	440	241	202	348	135
29	118	115	193	502		345	787	374	244	160	238	135
30	116	111	190	479		331	642	324	238	148	252	131
31	115		271	662		328		300		300	239	
		Moz	ath		Ма	ximum	Minimu	m	Mean	Per squa		-off in
Oct	ober					304	111		135	0.470		0.54

31 115 271 662	020					
Month	Maximum	Minimum	Mean	Per square mile	Run-off in	
October	304	111	135	0.470	0.54	
November	156	111	124	.432	.48	
	2,150	107	358	1.25	1.44	
December	1,130	225	550	1.92	2.21	
January	2,230	348	527	1.84	1.92	
February	869	328	421	1.47	1.70	
March		300	520	1.81	2.02	
April	2,330		478	1.67	1.92	
May	912	300	271	.944	1.05	
June	450	190			.84	
July	471	148	210	.732		
August	1,020	122	262	.913	1.05	
September	199	124	150	.523	.58	
The year	2,330	107	333	1.16	15.75	

SUSQUEHANNA RIVER BASIN

North Branch of Susquehanna River at Binghamton, N. Y.

Location. - Chain gage, lat. 42°05'30", long. 75°54'55", at Washington Street Bridge, at Binghamton, Broome County, 500 feet above mouth of Chenango River. Zero of gage is 821.49 feet above mean sea level.

Drainage area. - 2,290 square miles.

Records available. - July 1901 to December 1912, January 1915 to September 1937.

Extremes. - Maximum gage height observed during year, 11.91 feet Jan. 26; minimum, 1.94 feet Oct. 1.

1901-12, 1915-37: Maximum gage height observed, 22.85 feet Mar. 18, 1936; minimum 1.5 feet Sept. 20, 1908.

Maximum stage known, 23.5 feet Mar. 17, 1865.

Remarks. - Records good. Gage heights are obtained at this station for flood-warning purposes. Discharge is not determined.

Daily mean gage height, in feet, 1936-37

ay	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
	1.96	3.08	2.94	5.17	4.41	3.36	4.08	4.02	2.80	3.55	2.19	2.65
1	2.02	3.01	2.58	4.79	4.06	3.32	5.16	3.74	2.73	3.61	2.21	2.53
2	2.06	3.14	2.64	4.30	3.61	3.33	5.34	3.56	2.67	3.57	2.19	2.46
3	2.12	4.52	2.68	4.26	3.22	3.32	5.16	3.44	2.81	3.19	2.14	2, 43
5	2.18	9.19	2.69	4.02	3.28	3.76	4.90	3.25	2.91	3.00	2.11	2.75
	2.10	8.65	2.56	3.67	3.26	3.92	7.30	3.34	2.86	2.91	2.06	4.05
6	2.02	6.78	2.72	3.27	3.18	3.50	11.64	3.42	3.15	2.73	2.07	3.71
7	2.00	5.58	3.01	3.56	3.25	3.30	10.01	3.34	2.95	2.67	2.05	3.18
8	2.04	5.07	3.00	4.22	3.34	3.30	8.74	3.18	2.79	2.59	2.27	2.92
10	2.02	4.60	3.00	4.44	5.15	3.25	8.31	3.09	2.63	2.50	2.45	2.75
,,	2.05	4.15	3.44	4.12	4.66	2.94	6.58	3.01	2.57	2.47	2.37	2.67
11	2.04	3.92	5.86	3.88	3.84	3.09	6.04	2.95	2.58	2.44	2.51	2.57
12	2.08	3.59	5.18	3.66	3.54	2.93	5.54	2.86	2.58	2.50	3.17	2.53
13	2.17	3.52	4.37	3.64	3.46	2.91	5.44	2.93	2.63	2.89	3.11	2.55
14	2.14	3.44	4.02	6.18	3.92	2.90	6.53	3.65	2.76	2.71	2.75	3.03
16	2.10	3.40	3.80	7.73	3.84	2.85	8.23	5.03	2.98	2.58	2.53	3.17
	2.16	3.35	4.34	6.02	3.46	2.76	7.59	4.80	2.76	2.53	2.42	2.87
17	2.50	3.23	4.70	6.74	3.16	2.74	6.56	4.54	2.65	2.51	2.33	2.71
18	2.72	3.18	4.11	8.52	3.14	2.83	6.26	4.39	2.71	2.64	2.31	2.73
19	2.95	3.02	3.98	7.10	3.11	2.89	5.74	4.25	2.63	2.67	2.21	2.69
0.7	2.74	2.92	4.68	5.87	3.12	3.54	5.20	4.19	2.73	2.49	2.31	2.69
21	2.58	2.96	4.32	9.82	5.96	4.00	7.12	4.05	6.27	2.41	2.41	2.65
22	2.53	2.92	3.57	8.74	6.57	4.04	9.41	3.91	5.37	2.33	2.52	2.58
23	3.09	2.90	3.33	6.45	5.58	4.14	7.92	3.74	4.11	2.28	2.57	2.51
24	3.64	2.84	3.66	9.80	4.71	4.66	6.18	3.51	3.43	2.24	2.43	2.47
	3.79	2.81	3.86	11.63	4.08	4.35	5.42	3.39	3.13	2.20	2.35	2.43
26	3.93	2.96	4.64	9.14	3.82	3.74	4.94	3.39	2.93	2.21	2.68	2.39
27	3.94	2.91	5.02	6.39	3.54	3.44	4.78	3.41	2.90	2.19	4.44	2.35
28	3.44	2.63	4.88	5.41		3.30	4.70	3.27	2.99	2.15	4.11	2.35
29	3.24	3.03	4.38	5.00		3.18	4.33	3.08	3.25	2.20	3.17	2.50
30 31	3.20	3.03	4.54	4.58		3.40		2.94		2.15	2.81	

North Branch of Susquehanna River at Towanda, Pa.

Location. - Wire-weight gage, lat. 41°45'55", long. 76°26'25", at Bridge Street Bridge, at Towanda, Bradford County. Zero of gage is 693.85 feet above mean sea level.

Drainage area. - 7,797 square miles.

Drainage area. - 7,797 square miles.

Records available. - October 1918 to October 1920, October 1931 to September 1937
in reports of U. S. Geological Survey; December 1892 to September 1937 in reports of Pennsylvania Department of Forests and Waters.

Average discharge. - 19 years (1918-37), 10,090 second-feet.

Extremes. - Maximum discharge during year, 73,300 second-feet Jan.23 (gage height, 13.1 feet, from graph based on gage readings); minimum, 874 second-feet Oct. 1, 3, 10 (gage height, 0.31 foot).

1892-1937: Maximum discharge, 188,000 second-feet Mar. 19, 1936 (gage height, 25.03 feet); minimum, 538 second-feet Dec. 3, 1930 (gage height, -0.15 foot); minimum daily discharge, 560 second-feet Aug. 3, 1936.

Maximum flood known prior to 1892, 25.0 feet Mar. 17, 1865 (discharge, about 188.000 second-feet.

about 188,000 second-feet. Remarks. - Records good. Discharge for high stages determined from graphs based on twice-daily gage readings.

Daily and monthly discharge, in second-feet, 1936-37

Day	Oot.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	887	5,950	2,990	20,700	14,700	8,350	13,200	16,700	5,590	7,150	1,590	6,750
2	995	5,160	2,990	18,200	12,800	7,950	18,200	14,200	5,160	7,950	1,680	5,16
3	887	5,950	3,240	15,200	10,100	7,550	21,200	12,400	4,790	7,550	1,680	4,44
4	968	12,600	3,660	15,200	8,350	7,550	19,700	10,600	5,160	6,750	1,510	6,950
5	1,020	46,200	3,800	12,800	7,950	12,800	19,200	9,200	5,160	5,550	1,430	9,030
6	1,210	44,400	3,240	10,600	7,550	14,200	28,500	14,800	5,160	4,790	1,360	11,00
7	1,140	31,400	3,510	8,750	7,550	11,400	53,700	25,700	5,160	3,960	1,360	10,60
8	995	24,200	3,660	8,350	7,550	10,100	50,400	16,200	5,950	3,510	1,280	7,95
9	900	19,700	3,800	11,000	7,550	10,600	41,300	13,200	4,440	3,240	1,510	5,95
ro	914	16,200	4,280	14,700	12,400	9,200	43,400	11,000	3,960	2,990	4,180	4,79
1	968	13,700	6,230	13,700	14,700	7,550	32,600	9,650	3,800	2,760	8,350	4,11
12	995	11,400	19,600	11,900	11,400	6,350	26,600	8,350	4,440	2,760	8,350	3,66
13	1,110	10,100	21,800	10,600	9,650	6,350	23,000	7,950	4,110	2,760	6,750	3,24
14	1,140	8,750	16,200	10,300	8,350	5,950	21,200	9,650	3,960	3,800	6,750	3,51
15	1,140	8,350	12,400	21,400	9,200	5,950	27,800	14,200	4,440	4,110	5,160	3,80
16	1,210	8,350	11,000	40,100	10,100	5,550	46,200	17,700	6,750	3,800	3,800	4,79
17	1,280	7,950	12,400	29,600	8,350	5,160	38,500	18,200	5,550	3,380	3,240	4,79
18	3,240	7,550	17,200	25,700	7,550	5,160	30,200	17,700	4,440	3,120	3,120	3,800
19	4,110	6,750	12,800	38,200	6,750	4,790	27,800	16,200	4,790	2,880	2,440	3,38
05	5,160	6,350	13,200	32,000	6,350	5,550	23,600	14,200	5,950	2,990	2,130	3,24
21	4,790	5,950	16,700	24,200	5,950	7,950	20,200	13,200	5,160	2,880	2,130	3,12
25	3,660	5,160	15,700	51,600	12,800	13,700	35,300	12,400	27,400	2,440	3,510	2,99
23	2,990	5,550	11,000	62,900	24,200	16,200	58,100	11,900	26,900	2,230	3,800	2,880
45	3,510	5,550	9,200	37,000	21,200	17,700	45,200	11,900	16,700	2,040	3,380	2,650
25	6,750	5,160	9,200	44,200	16,700	19,700	30,800	10,100	11,000	1,850	3,120	2,440
85	8,350	4,790	10,600	68,500	13,200	18,200	23,600	8,750	8,350	1,760	2,760	2,330
27	8,350	4,440	15,700	49,000	11,000	13,200	20,700	8,750	6,750	1,590	28,300	2,130
85	8,750	4,280	18,200	30,200	9,650	11,000	24,200	13,200	5,950	1,590	37,600	2,130
95	7,950	3,380	18,700	21,800		9,200	26,000	11,000	6,750	1,680	18,700	1,940
50	6,750 5,950	3,120	15,200	18,700		8,750	20,700	8,350 7,150	7,150	1,590	12,400	1,940
		Mos	ath			ximum	Minin				are Run	-off in
	***						Minim		Mean	mile	i	nohes
Ooto	ber					8,750 6,200	8 3,1		3,164	0.40		0.47
Dene	mber				9	1,800	2,9		1,610	1.38		1.66 1.59
Jann	arv	• • • • • • • • •			6	8,500	8,3		5,610			
						4,200	5,9		0.840	3.28 1.39		3.78
faro	h					9,700	4,7		9,799	1.26		1.45
Apri	1				5	8,100	13,2		0,370	3.90		1.45 4.35
						5,700	7,1		2,730	1.63		1.88
						7,400	3,8		7,362	.94		1.05
						7,950	1,5		3,461	.44		.51
Angni	at				3	7,600	1,2		6,184	.79		.91
						1,000	1,9		4,516	.57		.65
	The year					5,500		87 1	1,350	1.46		9.75

North Branch of Susquehanna River at Wilkes-Barre, Pa.

Location. - Water-stage recorder, lat. 41°15'00", long. 75°53'10", at Market Street Bridge, at Wilkes-Barre, Luzerne County. Zero of gage is 511.94 feet above mean sea level.

Drainage area. - 9,960 square miles.

Records available. - March 1899 to December 1913, October 1918 to September 1921,

October 1931 to September 1937 in reports of U. S. Geological Survey; November 1890 to September 1937 in reports of Pennsylvania Department of Forests and

Waters.

Average discharge. 38 years (1899-1937), 13,530 second-feet.

Extremes. Maximum discharge during year, 76,500 second-feet Jan. 27 (gage height, 1.7.13 feet); minimum, 1,470 second-feet Oct. 5 (gage height, 1.65 feet).

1890-1937: Maximum discharge, 232,000 second-feet Mar. 20, 1936 (gage height, 33.07 feet); minimum, 820 second-feet Sept. 12, 16, 17, 20, 1913.

Maximum stage known, 33.1 feet, from floodmarks, Mar. 18, 1865 (discharge, about 232,000 second-feet).

Remarks. - Records good. Discharge for periods of recorder fat lure, Oct. 31, Feb. 24, Aug. 3, 4, determined by comparison with records for stations upstream.

Daily and monthly discharge, in second-feet, 1936-37

ay	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
				30.000	10 700	11,900	13,200	22,800	8,630	8,340	2,200	9,210
1	1,630	6,280	3,200	18,900	19,700		16,900	18,900	7,500	8,920	2,290	7,500
2	1,580	6,010	3,100	21,500	17,300	11,000	10,500	16 500	6,410	8,220	2,300	6,280
5	1,580	5,620	3,780	18,900	14,600	10,100	21,500	16,500		8,630	2,100	5,600
4	1,580	6,410	4,130	17,300	12,200	9,800	23,300	14,300	6,200		2,030	
5	1,520	26,000	4,370	16,100	10,700	12,200	21,500	12,600	6,410	7,780		
	3 500	EQ 500	4,610	14,000	9,800	17,300	25,200	12,600	6,140	6,540	1,960	10,300
6	1,520	52,500	4,860	11,600	9,210	16,500	43,900	21,600	8,060	5,490	1,960	11,000
7	1,580	41,300		10,700	9,500		57,300	24,500	7,080	4,980	1,880	10,400
8	1,630	30,300	4,370	11,000	9,500		51,800	17,700		4,490	1,960	8,340
9	1,630	23,800	4,010	11,000			52,500	15,000		4,010	2,030	6,680
10	1,580	19,300	4,860	14,600	11,000	12,600	32,000					7 3
	1,520	16,100	6,620	16,900	13,300	10,700	45,500	12,900		3,780	2,630 9,620	5,620
11	1,520	14,000	13,600	15,400	15,000	9,210	35,300	11,600		4,250	0,020	
12		11,900	23,800	13,600	12,900		29,200	10,400	5,110	3,890	9,800	4,050
13	1,580	10,700	21,500	12,200	11,600		26,200	11,300	5,240	3,660	8,340	4,250
14	1,580	10,700	16,900	14,600	11,300		25,200	15,700		4,010	7,360	4,130
10	1,000	,,,,,,			122 000	7 700	70 500	20,200	5,240	6,680	6,280	4,370
16	1,690	9,210	13,600	34,200	11,300	7,780	32,500	21,000		6,140	4,980	4,860
17	1,820	8,920	12,600	39,500	11,300	7,500	47,800			5,110	4,130	
18	2,030	8,630	15,000	32,000	10,400	7,080	38,900	21,500		5,110	3,780	
19	2,510	8,060	16,100	35,300	8,920	6,950	32,500	20,200	5,750	4 370	3,430	
20	4,370	7,500	15,700	40,700	8,340	7,080	29,500	18,900	5,490	4,370	0,100	
	4 000	6 050	18,100	32,500	7,780	10,100	25,200	16,90	7,000	3,890	2,880	3,890
21	4,860	6,950					35,500		11,000	3,780	3,350	3,780
22	4,980	6,540	18,500		22,80		62,300			3,430	3,660	3,540
23	4,370	6,140	15,400	72,800			64,400		24,200	2,980	4,86	3,430
24	3,890	6,140	12,900	59,400 48,400	30,00		46,500			2,770	4,37	3,320
25	3,890	0,010						10.60	11,900	2,570	4,01	2,980
-	6,410	5,750	10,400	68,100	18,90		33,600			2,480	4,17	
26	8,060				15,70	0 20,600	26,700	11,00	9,210	2,400		
27	9 630		16,500			0 16,500	26,700	10,10	0 8,060	2,290	37,60	
28	8,630					13,600		11,30		2,200	30,60	
29	8,630					12,200		13,20	0 8,060	2,200	17,30	0 2,380
30	8,630	4,130	16,500			11,600		10,70	0	2,200	12,30	0
-			onth			Maximum	Minis	aum.	Mean	Per square		un-off in
						8,630	1.	520	3,417	0.3	13	0.40
00	tober					52,500		130	12,630	1.2		1.42
No	rember					23,800		100	11,800	1.18	3	1.36
De	oember					72,800	10	700	29,760	2.9	9	3.45
Ja	DHATY						7	780	13,690	1.3	7	1.43
Tal	TUATY					30,000	6	950	12,980	1.3		1.50
Ma	reh					26,200			35,000	3.5		3.92
An	ril					64,400		200	15,600	1.5		1.91
Me	v					24,500		100	8,682	.8		.97
T	.					31,700		740	4 604	.4		.54
Tu	1					8,920	2,	200	4,684		68	.77
Ju						37,600	1,	880	6,650		38	.60
AU	Starban					11,000	2,	380	5,355	.5		
30	Premoer.								12 770	1 3	7	18.08

The year.....

13,330

North Branch of Susquehanna River at Danville, Pa.

Location. - Wire-weight gage, lat. 40°57'25", long. 76°37'20", at highway bridge at Danville, Montour County. Zero of gage is 431.07 feet above mean sea level.

Drainage area. - 11,220 square miles.

Records available. - March 1899 to December 1913, October 1918 to September 1921,

July 1932 to September 1937 in reports of U. S. Geological Survey; March 1899 to December 1903, March 1905 to September 1937 in reports of Pennsylvania

Department of Forests and Waters.

Average discharge. - 34 years (1899-1900, 1901-3, 1905-31, 1932-37), 15,220 second-

Extremes. - Maximum discharge during year, 93,400 second-feet Jan. 23 (gage height, 15.2 feet, from graph based on gage readings); minimum, 1,610 second-feet Oct.

7, 13, 14.

1899-1937: Maximum discharge, 250,000 second-feet Mar. 20, 1936; maximum gage height, 30.7 feet, from floodmarks, Mar. 9, 1904 (affected by ice); minimum discharge, 830 second-feet Sept. 23-25, 1900 (gage height, 1.6 feet).

Remarks.- Records good. Discharge for day of missing gage heights, Aug. 1, determined by comparison with records for stations upstream. Discharge for high stages determined from graphs based on twice-daily gage readings.

Daily and monthly discharge, in second-feet, 1936-37

Day	Oot.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,150	6,840	4,180	21,800	26,000	15,400	14,400	31,500	10,400	9,400	2,600	12,900
2	2,150	6,840	3,190	26,000	21,800	13,900	17,000	24,800	8,900	9,400	2,190	9,400
3	1,740	6,430	4,530	24,800	20,000	12,900	23,000	22,400	7,900	9,900	2,440	7,900
4	1,740	6,430	5,260	22,400	16,400	11,900	26,600	18,800	7,900	9,900	2,190	6,480
5	1,740	12,800	5,260	20,000	13,900	13,400	26,600	16,400	6,940	9,400	2,190	6,940
6	1,740	50,800	5,260	18,200	12,400	18,800	26,600	17,000	7,410	8,400	2,080	8,900
7	1,610	52,800	7,690	15,500	12,400	21,200	40,000	18,800	7,410	6,480	2,190	13,900
8	1,740	39,000	6,840	14,000	10,900	18,200	64,300	34,300	8,900	5,590	2,320	11,900
9	1,880	30,100	6,030	13,000	11,400	15,900	61,600	24,800	7,410	4,960	2,190	10,900
10	1,880	24,800	6,030	16,000	12,900	14,900	59,800	20,600	7,410	4,560	2,190	8,400
11	1,880	20,600	9,510	21,200	13,400	14,400	57,100	17,000	6,030	4,180	2,580	6,480
12	1,740	17,000	15,500	20,600	17,000	11,900	47,200	14,900	5,380	3,640	3,990	5,590
13	1,610	15,000	26,000	18,200	17,000	10,400	37,100	13,400	4,960	4,180	11,900	4,750
14	1,610	13,000	30,100	16,000	14,400	9,900	32,200	14,900	5,590	3,820	10,400	4,360
16	1,740	11,000	24,200	16,000	14,400	9,900	30,800	17,600	5,590	3,820	8,900	3,990
16	1,740	10,500	18,800	28,700	13,400	9,400	36,400	24,200	5,590	4,750	7,900	4,180
17	2,010	10,000	16,500	48,000	13,900	8,400	54,400	26,600	5,590	7,900	6,030	4,560
18	2,150	10,000	15,500	42,400	12,900	8,400	48,800	27,300	7,900	6,480	5,160	5,380
19	2,580	9,040	20,600	41,600	11,400	7,900	40,800	26,000	7,410	5,380	3,990	5,590
20	2,730	8,580	21,200	51,200	10,400	8,400	36,400	24,200	6,030	5,160	3,640	4,750
21	4,890	8,130	21,200	44,000	9,400	11,900	32,200	21,800	6,030	4,560	3,640	3,990
22	5,260	7,690	23,000	41,600	20,600	18,800	35,000	19,400	10,400	3,820	3,480	3,820
23	5,260	6,840	21,200	77,200	28,000	24,800	64,300	17,600	25,000	3,990	5,160	3,640
24	4,890	6,840	18,200	80,400	36,400	28,000	78,400	17,000	34,300	3,480	4,560	3,480
25	4,180	6,840	14,500	63,400	32,900	28,700	60,700	15,900	23,000	3,000	5,380	3,310
26	4,530	6,430	13,000	74,400	26,000	32,200	45,600	14,900	16,400	2,860	4,750	3,160
27	7,260	6,430	13,000	86,100	21,800	28,700	36,400	12,900	12,400	2,710	4,750	3,000
28	9,040	6,030	17,000	64,300	18,200	21,800	33,600	11,900	9,900	2,580	14,200	2,710
29	9,040	5,260	21,800	44,800		18,200	37,800	13,900	8,900	2,440	47,200	2,580
30	8,580	5,640	23,000	39,900		15,900	37,800	15,400	8,900	2,440	26,000	2,580
31	8,130		20,600	28,000		14,400		12,400		2,580	16,400	
		Мо	nth		M	aximum	Minim	U.SMA	Mean	Per squ	are Rur	-off in
Ooto	ber					9,040	1,61		5,523	0.31		0.36
Nove	ember					52,800	5,26		260	1.27		1.42
Dece	ember					30,100	3,19		,800	1.32		1.52
Jant	nary					36,100	13,00		5,760	3.28		5.78
						36,400	9,40		7,490	1.56		1.62
					1 .	32,200	7,90		,090	1.43		1.65
-						78,400	14,40		1,430	3.69		4.12
						34,300	11,90		630	1.75		2.02
						34,300	4,96		863	.87		.98
		• • • • • • •				9,900	2,44		,218	.46		.54
						47,200	2,08		7,180	.64		.74
Sept	cember					13,900	2,58	3 0	984	.53	3	.59
		ar				36,100	1,61	1 -	990	1.43		9.34

Susquehanna River at Sunbury, Pa.

Location. - Wire-weight gage, lat. 40°50'55", long. 76°48'20", at highway bridge at Sunbury, Northumberland County. Zero of gage is 419.00 feet above mean

sea level.

Drainage area. - 18,300 square miles.

Records available. - August 1916 to September 1937.

Extremes. - Maximum gage height observed during year, 11.92 feet Jan. 23; minimum,

0.78 foot Oct. 1.

1916-37: Maximum gage height, 26.85 feet, from floodmark, Mar. 19, 1936;
minimum, 0,32 foot Sept. 25-27, 1932, at a site 3,700 feet upstream.

Maximum flood known prior to 1916, 22.5 feet in March 1865.

Remarks. - Records good. Station is maintained for flood-warning purposes. Discharge is not determined.

Daily mean gage height, in feet, 1936-37

Day	Oct.	Nov.	Deo.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.82	1.93	1.78	5.04	4.65	3.24	3.12	6.64	2.64	2.12	1.26	2.92
2	.84	1.87	1.44	5.49	4.30	3.03	3.23	5.50	2.43	2.13	1.10	2.54
3	.84	1.82	1.53	5.14	3.89	2.92	3.59	4.84	2.26	2.14	1.04	2.26
4	1.04	1.92	1.67	4.73	3.52	2.90	3.90	4.32	2.27	2.10	.99	2.04
5	1.10	3.71	1.76	4.42	3.10	3.01	3.91	3.92	2.16	2.08	.95	2.00
6	.97	7.76	1.82	4.05	2.99	3.50	3.96	3.95	2.10	1.97	.94	2.20
7	.38	7.40	2.18	3.66	2.91	4.04	5.20	4.21	1.99	1.80	.90	2.48
8	.85	5.90	2.09	3.43	2.70	3.80	6.80	5.26	2.18	1.66	1.02	2.51
9	.81	4.98	1.89	3.36	2.79	3.50	6.80	4.70	2.02	1.52	1.06	2.40
10	.34	4.36	1.90	3.76	2.95	3.35	6.89	4.26	1.93	1.44	1.06	2.13
11	.84	3.88	2.44	4.28	3.05	3.24	6.80	3.84	1.86	1.36	1.56	1.88
12	.81	3.50	3.21	4.44	3.22	2.96	6.04	3.56	1.74	1.36	2.31	1.72
13	.80	3.16	4.14	4.31	3.20	2.78	5.32	3.32	1.70	1.33	2.99	1.64
14	1.11	2.38	4.64	3.96	3.08	2.62	4.84	3.44	1.72	1.39	2.88	1.52
15	1.02	2.68	4.10	3.96	3.12	2.62	4.70	4.12	1.77	1.46	2.50	1.49
16	.95	2.61	3.69	5.12	2.97	2.56	5.05	4.72	1.78	1.54	2.70	1.45
17	.94	2.48	3.38	6.76	2.89	2.46	6.23	4.76	1.93	2.02	1.96	1.48
18	1.11	2.40	3.37	6.24	2.78	2.41	6.04	4.72	2.09	2.03	1.79	1.52
19	1.79	2.31	3.62	6.30	2.64	2.34	5.42	4.53	2.02	1.86	1.65	1.61
20	2.25	2.20	4.22	6.96	2.51	2.40	5.00	4.26	1.90	1.88	1.48	1.49
21	2.14	2.07	4.44	6.52	2.42	2.99	4.68	3.98	1.86	1.76	1.46	1.36
22	1.99	2.03	4.64	6.69	4.28	3.46	4.88	3.75	2.27	1.56	1.83	1.30
23	1.86	1.94	4.34	10.93	4.92	4.23	7.30	3.51	3.42	1.48	1.91	1.26
24	1.71	1.84	3.91	11.04	5.13	4.38	8.88	3.37	4.60	1.38	1.76	1.23
25	1.62	1.79	3.50	9.14	4.92	4.39	7.66	3.23	3.77	1.30	1.86	1.20
26	1.56	1.64	3.22	10.14	4.34	4.62	6.36	3.06	3.10	1.23	1.73	1.20
27	1.90	1.80	3.18	10.56	3.86	4.52	6.11	2.91	2.57	1.16	2.00	1.12
28	2.10	1.82	3.46	8.44	3.44	4.12	7.78	2.32	2.33	1.16	3.66	1.06
29	2.16	1.64	4.18	6.65		3.74	9.02	2.92	2.19	1.17	6.00	1.04
30	2.21	1.70	4.64	5.53		3.41	8.24	3.19	2.16	1.12	4.42	1.02
31	2.10		4.45	4.90		5.20		2.90		1.63	3.46	

Susquehanna River at Harrisburg, Pa.

Location. - Water-stage recorder, lat. 40°15'10", long. 76°52'30", at Nagle Street, 500 feet above sanitary dam, and at Market Street Bridge, 3,700 feet above sanitary dam, and wire-weight gage at Walnut Street Bridge, 500 feet above Market Street, in Harrisburg, Dauphin County. Zero of gages is 290.04 feet above mean sea level.

above mean sea level.

Drainage area. - 24,100 square miles.

Records available. - October 1890 to September 1937.

Average discharge. - 47 years, 34,740 second-feet.

Extremes. - Maximum discharge during year, 231,000 second-feet Jan. 24 (Nagle Street gage height, 12.62 feet; Walnut Street gage height, 13.90 feet); minimum, 4,270 second-feet Oct. 1 (Nagle Street gage height, 3.07 feet; Walnut Street gage height, 3.10 feet).

1890-1937: Maximum discharge, 740,000 second-feet Mar. 19, 1936 (Nagle Street gage height, 29.23 feet; Walnut Street gage height, 30.33 feet); minimum, 1,600 second-feet Nov. 29, 1930 (Nagle Street gage height, 2.48 feet; Walnut Street gage height, 2.56 feet).

Maximum flood known prior to 1890, 26.8 feet at Walnut Street June 2, 1889 (discharge, about 699,000 second-feet).

Remarks. - Records excellent except those for periods of ice effect, Nov. 27 to

Remarks. - Records excellent except those for periods of ice effect, Nov. 27 to Dec. 3, Dec. 7-9, which are good and were determined from power-house records of the Holtwood plant of the Pennsylvania Water and Power Co.

Daily and monthly discharge, in second-feet, 1936-37

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4,600	15,000	8,000	56,700	64,400	39,200	34,000	131,000	25,700	15,800	12,800	31,600
2	4,820	15,700	8,000	68,800	58,300	35,300	31,600	102,000	22,500	15,400	9,350	25,300
3	5,830	15,000	9,000	71,600	50,500	32,800	31,600	78,600	20,300	15,400	7,520	20,900
4	5,830	13,200	12,300	67,300	43,300	30,300	34,000	62,900	20,300	15,400	6,610	18,800
5	5,370	20,800	14,100	59,800	37,900	30,300		53,600	19,000	15,600	6,220	16,900
6	6,350	82,700	13,000	52,000	34,000	31,600	39,200	50,500	17,500	15,200	5,960	18,00
7	5,960	125,000	17,000	46,100	29,800	39,200	43,300	55,100	16,300	13,900	8,300	19,80
8	5,480	94,300	20,000	42,000	29,100	43,300		59,800	15,800	12,500	7,130	22,70
9	5,150	68,800	22,000	40,600	28,600	40,600	97,000	68,800	16,300	11,000	8,300	22,30
10	5,260	53,600	21,100	42,000	30,300	36,600		56,700	17,500	10,200	7,390	20,10
11	5,150	44,700	23,700	58,300	34,000	34,000	99,500	49,000	17,800	9,500	9,800	16,70
12	4,930	37,900	34,000	73,000	34,000	31,600		43,300	14,600	8,900	14,000	14,60
13	4,930	32,800	43,500	70,200	35,300	28,600		37,900	13,200	8,450	23,900	15,00
14	4,820	28,400	55,100	58,300	34,000	26,500		37,900	12,500	8,300	27,700	12,00
15	5,370	25,000	53,600	50,500	32,800	25,500		42,000	15,000	10,100	24,600	10,80
16	6,350	22,300	44,700	53,600	32,800	24,800	58,300	52,000	12,700	11,800	19,600	10,40
17	6,740	20,900	39,200	78,600	31,600	23,700	68,800	58,300	12,700	12,200	16,300	10,20
18	7,460	19,600	36,600	94,500	29,800	22,500	84,000	56,700	14,600	16,500	14,100	10,20
19	16,600	18,400	35,300	91,900	27,900	22,000		55,100	16,300	16,700	12,800	10,20
OS	19,800	17,500	44,700	99,500	26,000	22,000		50,500	15,600	14,400	11,600	10,70
21	20,300	16,300	59,800	104,000	24,600	25,300	58,300	46,100	14,400	15,400	10,600	10,20
22.	17,800	15,200	59,800	99,300	49,900	35,300	56,700	42,000	15,600	12,700	11,300	9,50
23	15,600	14,400	56,700		97,000	43,300		37,900	19,400	10,800	16,700	8,75
24	14,100	14,100	47,600		84,000	52,000	131,000	35,300	39,200	10,100	18,400	8,45
25	12,500	13,700	42,000	185,000	78,600	52,000	131,000	32, 900	43,300	9,650	15,800	8,17
26	11,600	13,200	36,600	176,000	65,800	52,000	110,000	30,300	32,800	8,750	15,400	7,91
27	11,300	12,500	34,000	192,000	53,600	56,700	157,000	28,900	25,500	7,910	27,500	7,52
28	12,700	10,000	34,000	162,000	44,700		212,000	27,900	20,700	7,520	30,000	7,39
29	15,200	9,500	39,200	119,000		49,000	212,000	26,900	18,000	7,260	56,000	7,26
30	15,900	9,000	50,500	89,300			180,000	27,900	16,300	7,260	65,800	6,74
31	15,800		55,100	73,000		36,600		29,300		8,450	42,000	
		Mon	ith		Ma	ximum	Minim		Mean	Per squa		off in
Octo	ober					20,300	4,600	9	,665	0.401	(.46
Nove	ember					25,000	9,000		780	1.24		.38
Dece	ember					59,900	8,000		520	1.43		.65
Jant	ary				. 2	24,000	40,600		550	3.94		.43
Febr	ruary					97,000	24,600		,660	1.81		.88
						56,700	22,000	36	,170	1.50		.73
						12,000	31,600	85	,980	3.57		.98
					1:	31,000	26,900		,550	2.10		.42
						13,300	12,500		,310	.801		.89
July	y				1	16,700	7,260) 11	,650	.483		.55
						55,300	5,960	18	3,180	.754		.87
						31,600	6,740	13	,900	.577		.64
						24,000	4,600		,100	1.54		.88

Susquehanna River at Marietta, Pa.

Location. - Water-stage recorder, lat. 40°03'15", long. 76°31'50", 420 feet above mouth of Chickies Creek and 1 mile below Marietta, Lancaster County. Zero of gage is 200.00 feet above mean sea level.

Drainage area. - 25,990 square miles.

Records available. - October 1931 to September 1937.

Extremes. - Maximum discharge during year, 241,000 second-feet Jan. 24 (gage height, particular of the condense o 47.4 feet, from graph based on observer's readings); minimum, 2,950 second-feet Oct. 12 (gage height, 31.96 feet); minimum daily discharge, 3,720 second-feet Oct. 12.

1931-37: Maximum discharge, 787,000 second-feet Mar. 19, 1936 (gage height, 60.73 feet); from rating curve extended above 450,000 second-feet on basis of channel studies; minimum, 618 second-feet Sept. 26, 1932 (gage height, 30.89 feet), during shut-down at York Haven power plant in order to obtain low-water current meter measurements; minimum daily discharge, 1,380 second-feet Sept. 26, 1932.

Maximum flood known prior to 1931, 58.3 feet, from floodmark, June 2, 1889 (discharge, about 700,000 second-feet).

Remarks. - Records good. Discharge for period of ice effect, Nov. 28 to Dec. 3, determined from power-house records of Holtwood plant of Pennsylvania Water and Power Co. Discharge for periods of recorder failure, Jan. 17-26, Feb. 22, 23, Aug. 23, 25, 26, determined by comparison with records for the station at Harrisburg. Flows below 8,000 second-feet regulated by Metropolitan Edison Co. plant at York Haven.

Daily and monthly discharge, in accord-fact 1936-37

Day	Oot.	Nov.	Dec.	Jan.	Te	b.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4,840	16,000	8,200	61,800	78.	700	45,400	36,200	146,00	0 28,000	18,700	11,800	36,700
2	4,940	15,300	9,000	72,000		600	39,800	32,900	109,00	0 24,600	17,300	12,700	
3	5,110	13,400	12,000	79,500		800	36,200	33,600	86,50		16,600	9,120	
4	6,120	14,000	14,300	76,200		500	34,000	37,400	72,90		16,300	7,550	23,100
5	5,960	15,000	13,900	68,000		800	32,900	43,500	60,30		17,000	7,110	
6	5,570	59,600	14,000	60,300	37.	800	34,600	46,100	57,30	0 19,400	20,100	6,050	
7	6,940	124,000	18,000	52,900		000	39,800	51,500	60,30		16,600	7,710	18,000
8		103,000	22,000	50,100		900	47,400	74,700	61,30		14,600	11,000	
9	5,740	77,900	24,600	46,500		900	44,800	99,500	76,60		12,800		
10	4,710	60,300	22,300	47,400		400	39,800	99,500	64,90	20,800	11,600	9,250	23,100
11	7,770	48,700	23,900	61,800	37.	400	37,400	103,000	55,80	20,800	10,500		
12	3,720	41,000	34,900	77,800		400	35,100	97,600	48,70		10,500	8,320	19,200
15	4,810	34,000	44,800	77,800		400	31,200	83,000	42,20	15,300	8,990	14,700	16,300
14	5,080	29,600	55,800	68,000		600	28,000	71,200	41,00			27,700	14,300
15	5,030	26,300	60,300	60,300		600	27,100	63,300	43,90		8,750	29,300	13,100
16	5,710	23,900	50,100	60,800	37.	400	27,100	61,800	52,90	14,000	13,700	23,100	
17	7,140	21,600	46,100	79,900		100	25,400	70,200	61,20	13,700	13,300	19,400	10,500
18	9,490	20,800	41,000	95,000		900	24,600	88,300	61,80	16,300	16,000		10,800
19	13,300	19,400	38,600	95,000		900	23,900	81,300	60,30	21,800	18,700	16,600	10,100
20	19,400	18,700		100,000		300	24,600	71,200	55,80		17,000	13,100	10,400
21	21,600	17,500	69,600	110,000	28,	000	27,100	63,300	50,100	16,600	14,300	11,900	10,800
22	19,400	16,300		105,000	60,		38,600	61,800	45,600		14,300	15,300	
23	17,300	15,000			104,		48,700	79,000	41,000		12,500	22,200	10,100
24	15,300	15,000	54,300	234,000	95,		58,800	128,000	37,400		11,100	22,300	9,340
25	13,400	14,000	46,100	203,000	90,		58,800	139,000	35,100	50,100	10,800	20,100	2,530 8,090
26	12,500	13,700	40,900	180,000	77,	900	60,300	116,000	31,900	38,900	10,300	17,300	8,100
27	11,500	12,500	36,200	195,000	64,	900	63,300	158,000	30,900		9,240	25,600	7,220
28	11,700	9,500	35,100	178,000	54,			220,000	29,000		8,510	30,900	7,480
29	14,500	11,000	38,600	135,000				223,000	29,300		7,590	49,300	7,290
30	16,600	9,500		104,000				193,000	28,000		7,820	75,000	6,960
31	16,100		58,800	86,500			39,800		29,900		8,110	50,900	0,300
		Mon	th			Ma.	zimum	Minimu	m	Mean	Per squa		-off in
Octo	ber						1,600	3,72	0	9,954	0.383	(0.44
NOA	mber	• • • • • • • •			!		4,000	9,50	0 3	0,550	1.18		.32
7-06	EDer						9,600	8,20	0 3	7,580	1.45		.67
							4,000	46,50	0 9	9,470	3.83		.42
Febr	uary						1,000	28,00		0,230	1.93		.01
MATO	n						3,300	23,90		9,760	1.53		.76
							5,000	32,90	0 9	0,900	3.50		.90
							6,000	28,00	0 5	5,080	2.12		.44
une	uneuly			!		0,100	13,70	2	1,390	.823		.92	
uly		• • • • • • • •					100	7,59	0 1	3,030	.501		.58
Augu	et						5,000	6,05	0 2	0,220	.778		• 50
sept	ember					36	700	6,960		4,770	.568		.63
	The year]								

Chemung River at Corning, N. Y.

Location. - Chain gage, lat. 42°08'50", long. 77°03'40", at Bridge Street Bridge, at Corning, Steuben County. Zero of gage is 912.82 feet above mean sea level.

Drainage area. - 2,010 square miles.

Records available. - December 1909 to September 1937.

Extremes. - Maximum gage height observed during year, 11.3 feet Jan. 25; minimum, 2.0 feet Oct. 1-4, 6-11, 15, 16.

1909-37: Maximum gage height, 20.1 feet July 8, 1935; minimum, 1.8 feet Sept. 2 3 1921

Sept. 2, 3, 1921. Maximum stage known prior to construction of dikes, 20.0 feet June 1,

Remarks. - Records good prior to July 27 and poor thereafter. Gage heights are obtained at this station for flood-warning purposes. Discharge is not determined.

Daily gage height in feet, 1936-57

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
		0.6	2.6	5.7	4.4	3.2	5.0	5.4	3.6	3.2	2.3	5.5
1	2.0	2.6	2.0	4.7	4.0	3.2	5.4	4.9	5.4	5.1	2.5	3.2
2	2.0	2.6	2.7	4.5	3.4	3.2	5.5	4.7	3.3	3.0	2.3	3.0
3	2.0	2.7	2.6	4.5	3.6	3.5	5.0	4.4	3.4	2.9	2.3	3.3
4	2.0	3.0	2.6	4.7		6.2	5.4	4.2	3.3	2.9	2.2	5.7
5	2.1	8.0	2.6	3.7	3.5	0.2	5.4	3.2				
	2.0	6.0	2.6	3.6	3.5	4.7	7.3	7.5	3.2	2.8	2.2	3.6
6		5.3	2.6	3.6	3.5	4.0	7.7	7.7	3.1	2.7	2.2	3.3
7	2.0	5.3	2.5	3.6	3.5	4.2	6.1	6.2	3.0	2.7	2.8	3.1
8	2.0	5.1	0.6	4.3	3.8	4.6	6.4	5.5	2.9	2.7	2.8	2.9
9	2.0	4.7	2.6	4.3	3.8 4.3	3.7	6.4	5.1	2.9	2.6	2.9	2.8
10	2.0	4.3	2.6	4.0	4.0	3.7	0.4	0.1				
		4.0	2.9	4.2	3.6	3.4	6.1	4.7	4.0	2.6	6.2	2.7
11	2.0	4.0		4.0	3.3	3.3	5.9	4.4	3.4	2.8	4.9	2.7
12	2.1	3.7	5.7	2.0		3.2	6.1	4.3	3.2	2.7	4.3	2.6
13	2.1	3.6	4.5	3.7	3.4	3.2	5.5	5.6	3.1	2.6	3.8	2.6
14	2.1	3.4	3.9	3.7	3.4			6.1	3.8	2.6	3.3	2.6
15	2.0	3.3	3.8	9.6	3.4	3.2	8.1	0.1	0.0	2.0	0.0	
7.6	2.0	3.4	3.6	7.8	3.3	3.1	9.3	5.7	3.8	2.7	3.0	2.6
16		3.2	3.8	5.5	3.2	3.0	7.0	5.4	3.4	2.8	2.9	2.6
17	2.1		3.8	5.6	3.1	3.0	6.1	5.8	3.5	2.7	2.8	2.6
18	3.2	3.0		6.8	2.9	3.0	6.4	5.1	3.0	2.6	2.7	2.5
19	3.0	2.9	3.3	5.3	3.0	3.1	5.6	4.8		2.5	2.7	2.5
20	2.8	3.0	3.5	5.3	3.0	3.1	3.0	1.0	1			
-	2.6	2.9	4.7	4.9	3.0	4.0	5.1	4.4	3.4	2.5	2.7	2.4
21		2.9	4.0	10.3	3.6	5.7	9.2	4.3	9.2	2.5		2.4
22	2.5		3.5	8.6	4.2	4.3	9.6	4.3	5.6	2.4	3.4	2.4
23	2.4	2.8		6.0	4.1	5.5	7.4	4.4	4.7	2.4	3.0	2.4
24	2.4	2.7	3.5	9.3	3.9	5.4	6.3	4.1	4.1	2.4	2.8	2.4
25	2.9	2.7		9.5	3.9	3.4	0.0	7				
26	2.7	2.7	4.3	8.8	3.6	4.5	5.7	3.9	3.7	2.5	2.7	2.4
27	2.7	2.7	4.8	6.5	3.6	4.1	5.5	4.0	3.5	2.5	10.5	2.4
	0.7	2.7	5.1	5.4	3.4	4.0	5.7	5.6	3.4	2.5	6.7	2.4
28	2.7		4.7	5.1	0.2	3.8	6.8	4.6	3.4	2.4	4.5	2.4
29	2.6	2.7				4.0	5.9	4.0	3.3	2.4	3.9	2.4
30	2.6	2.7	4.2	4.8		4.3	0.0	3.8		2.4	3.4	

Towanda Creek near Monroeton, Pa.

Location. - Chain gage, lat. 41°42'35", long. 76°29'00", at highway bridge, late miles above mouth of South Branch of Towanda Creek and late miles southwest of Monroeton, Bradford County. Zero of gage is 774.14 feet above mean sea level.

Drainage area. - 214 square miles.

Records available. - October 1920 to September 1921, October 1931 to September 1937 in reports of U. S. Geological Survey; January 1914 to September 1937 in reports of Pennsylvania Department of Forests and Waters.

Average discharge. - 19 years (1914-16, 1920-37), 286 second-feet.

Extremes. - Maximum discharge during year, 2,950 second-feet Jan. 22 (gage height, 6.0 feet, from graph based on gage readings); minimum, 5.1 second-feet Oct. 7-9. 1914-37: Maximum discharge, about 15,800 second-feet Nov. 16, 1926 (gage height, 11.0 feet, from graph based on gage readings); minimum, 0.7 second-foot Sept. 15, 17, 21, 22, 1932.

Remarks. - Records fair. Discharge for periods of ice effect, Nov. 29 to Dec. 3, Feb. 4-8, determined from gage heights, weather records, and by comparison with records for stations in adjacent drainage areas. Discharge for high stages determined from graphs based on twice-daily gage readings. Some regulation at low stages from power operations upstream. at low stages from power operations upstream.

Daily and monthly discharge, in second-feet, 1936-37

ay	Oot.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	22	49	40	395	226	236	342	554	83	118	37	152
2	24	49	60	311	214	236	436	463	69	103	29	121
2 3	18	49	80	370	194	236	410	386	98	89	27	99
4	11	768	102	311	185	470	386	321	184	80	21	188
5	7.2	1,980	91	248	180	752	463	308	116	58	18	162
6	5.7	705	82	214	170	436	1,410	1,010	92	48	16	152
7	5.4	510	.93	180	160	342	965	586	73	40	130	108
8	5.1	395	91	214	170	321	692	463	58	34	102	89
9	5.1	320	93	275	149	342	1,290	436	50	30	58	69 58
10	14	270	85	330	169	209	925	386	48	39	40	58
11	34	214	331	298	183	184	728	321	47	203	229	50
12	28	190	570	239	155	184	586	284	40	173	222	54
13	20	176	350	210	180	173	554	274	34	102	700	54 51 59
14	14	158	284	436	230	142	492	806	43	78	268	59
15	11	149	222	1,180	311	152	766	1,140	110	91	162	50
16	15	146	206	672	302	152	728	805	80	268	119	41
17	39	128	244	450	293	142	554	845	51	196	90	44
18	196	125	234	802	252	133	492	522	47	363	130	46
19	108	102	214	600	120	133	436	463	65	222	83	40
20	70	100	1,140	420	116	163	386	386	56	162	63	36
21	53	102	558	608	131	389	775	342	51	119	68	31
22	42	100	365	2,370	1,360	463	2,190	284	273	90	184	2
23	45	96	284	1,160	805	522	1,520	268	163	71	184	25 25 25 25
24	93	91	222	570	554	463	965	236	105	56	142	23
25	112	85	206	1,100	492	655	692	196	86	48	113	
26	87	87	239	745	410	436	554	162	54	55	99	20 19 23
27	89	70	284	420	342	321	728	173	47	51	910	15
28	76	63	360	360	251	302	1,140	236	69	41	564	24
29	63	65	248	311		268	965	162	133	34	284	2:
30	54	55	214	275		251	692	126	100	29	209	2
31	57		395	262		268		100		40	173	

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	196	5.1	45.9	0.214	0.25
	1,980	49	247	1.15	1.28
November	1,140	40	258	1.21	1.40
December	2,370	180	527	2.46	2.84
January	1,360	116	297	1.39	1.45
February	752	133	306	1.43	1.65
March	2,190	342	775	3.62	4.04
April	1,140	100	421	1.97	2.27
May	273	34	84.2	393	.44
June		29	101	.472	.54
July	363	16	177	827	.95
August	910	19		297	.33
September	188	19	63.5	.291	.00
The year	2,370	5.1	275	1.29	17.44

Tunkhannock Creek at Dixon, Pa.

Location. - Chain gage, lat. 41°33'30", long. 75°53'40", at highway bridge at Dixon, Wyoming County, 3 miles northeast of Tunkhannock. Zero of gage is 610.50 feet above mean sea level.

The year....

above mean sea level.

Drainage area.- 383 square miles.

Records available.- October 1918 to September 1921, October 1931 to September 1937

in reports of U. S. Geological Survey; January 1914 to September 1937 in reports of Pennsylvania Department of Forests and Waters.

Average discharge.- 19 years (1918-37), 540 second-feet.

Extremes.- Maximum discharge observed during year, 5,620 second-feet Jan. 25 (gage height, 6.86 feet); minimum, 38 second-feet Oct. 15, 16 (gage height, 1.14 feet).

1914-37: Maximum discharge, 19,100 second-feet Sept. 30, 1924 (gage height, 13.1 feet), from rating curve extended above 5,300 second-feet; minimum, 9.0 second-feet Aug. 12, 1930 (gage height, 0.73 foot).

Remarks.- Records good except those for periods of ice effect, Nov. 29 to Dec. 11, Feb. 4-8, which are fair and were determined from gage heights, weather records, and by comparison with records for stations in adjacent drainage areas. Discharge for high stages determined from graphs based on twice-daily gage readings. Some regulation from storage in natural and artificial lakes and from operation of regulation from storage in natural and artificial lakes and from operation of gristmills upstream.

Daily and monthly discharge, in second-feet, 1936-37

Day	Oot.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	64	109	92	820	970	345	895	618	196	541	113	260
2	121	109	90	578	645	345	1,050	528	155	420	76	217
3	68	114	160	610	425	370	970	446	149	324	58	189
4	56	299	160	578	400	398	858	420	252	302	51	217
5	47	3,580	130	398	370	1,260	858	371	182	244	47	281
6	44	1,460	115	298	320	785	2,360	618	426	203	42	302
7	41	932	210	345	290	545	1,800	473	1,440	175	46	229
8	41	715	200	610	310	515	1,310	395	528	152	63	178
9	43	645	190	785	651	515	2,240	395	371	138	266	146
10	41	485	180	932	858	298	2,140	347	302	115	129	129
11	40	398	1,200	785	398	276	1,500	347	281	100	409	115
12	47	320	1,980	645	370	256	1,180	281	225	123	1,380	105
13	46	298	1,010	545	398	320	970	260	189	115	618	107
14	40	276	680	785	545	298	858	844	237	102	347	210
15	38	256	578	1,970	645	298	1,600	1,550	395	190	256	182
16	38	276	485	1,400	515	276	1,400	1,050	256	572	196	129
17	54	222	680	858	345	256	1,010	932	203	281	159	132
18	140	222	545	2,560	276	276	932	932	214	248	175	149
19	170	152	276	1,800	298	298	1,010	750	324	192	162	132
20	106	170	932	1,220	320	320	785	785	233	140	123	182
21	93	164	610	1,240	320	1,690	988	683	214	126	100	126
22	71	158	425	3,580	1,970	1,600	3,800	557	1,520	107	376	110
25	63	155	276	2,240	1,180	1,600	3,240	650	716	90	347	95
24	97	140	345	1,540	970	1,500	2,020	500	500	95	229	76
25	177	114	320	4,840	820	2,020	1,400	420	371	70	155	72
28	158	146	345	2,850	545	1,310	1,090	347	302	74	159	68
27	225	129	398	1,800	610	970	970	347	256	123	1,180	68
28	164	90	578	1,090	370	750	1,010	371	324	86	1,150	62
29	140	94	425	1,010		645	932	302	371	70	557	62
50	132	96	370	932		610	716	252	281	56	395	64
31	140		610	858		645		214		129	324	
		Mon	ith		Ma	ximum	Minima	m	Mean	Per squar		-off in
Octo	ber			. ,		225	38		88.5	0.231	-	0.27
						580	90		411	1.07		1.19
						980	90		471	1.23		1.42
						840	298	1.	307	3.41		3.93
						970	276		576	1.50		1.56
					. 2.	020	256		696	1.82		2.10
Apri	11				. 3.	800	716	1.	396	3.64		4.06
						550	214	-	548	1.43		1.65
					1.	520	149		380	.992		1.11
						572	56		184	.480		.55
						380	42		313	.817		.94
						302	62		146	.381		.43
										1001		

1.42

19.21

Wapwallopen Creek near Wapwallopen, Pa.

Location. - Water-stage recorder, lat. 41°03'35", long. 76°05'25", at Harts Bridge, 21 miles southeast of Wapwallopen, Luzerne County, and 31 miles above month. Zero of gage is 752.41 feet above mean sea level.

at low stages from operation of gristmills upstream.

Zero of gage is 752.41 feet above mean sea level.

Drainage area. - 45.8 square miles.

Records available. - October 1919 to September 1921, October 1931 to September 1937

in reports of U. S. Geological Survey; October 1919 to September 1937 in reports of Pennsylvania Department of Forests and Waters.

Average discharge. - 17 years (1920-37), 60.9 second-feet.

Extremes. - Maximum discharge during year, 511 second-feet Jan. 25 (gage height, 4.01 feet; minimum, 4.2 second-feet Aug. 7 (gage height, 0.83 foot).

1919-37: Maximum discharge, 2,260 second-feet Sept. 30, 1924 (gage height, 7.9 feet, from graph based on gage readings), from rating curve extended above 1,300 second-feet; minimum, 1.8 second-feet Sept. 1, 1936; minimum daily discharge 2.5 second-feet Sept. 2. 1936.

2.5 second-feet Sept. 2, 1936.

Remarks. - Records fair. Discharge for period of ice effect, Nov. 29 to Dec. 10,

Dec. 18, 19, Feb. 3-8, determined from gage heights, weather records, and by comparison with records for stations in adjacent drainage areas. Some regulation

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	18	8.7	10	57	117	84	66	98	28	20	7.6	14
2	13	8.0	15	45	89	81	64	87	26	16	5.4	13
3	9.4	7.6	35	54	80	58	59	79	32	14	5.6	13
4	8.0	21	30	- 50	70	70	54	74	45	12	4.9	14
5	7.3	84	22	52	62	131	54	68	28	12	4.4	31
6	5.6	33	27	62	58	94	103	104	24	10	4.4	21
7	5.4	21	75	48	55	76	80	91	23	9.4	7.2	14
8	5.6	18	65	54	50	72	67	71	19	9.0	12	12
9	6.2	19	60	51	83	70	104	65	18	8.0	17	11
10	7.0	18	5 5	63	91	69	108	60	18	7.3	17	11 9.9
11	8.4	16	140	60	69	64	84	54	18	7.3	79	10
12	8.0	15	150	54	78	60	79	51	18	7.6	55	9.4
13	8.4	13	92	52	52	54	74	59	14	8.4	28	9.0
14	7,3	12	77	52	70	51	73	161	18	8.0	18	10 11
15	7.3	13	78	117	69	50	140	144	19	11	12	11
16	7.0	16	68	95	58	50	117	108	16	11	12	8.4
17	10	14	55	80	54	49	94	108	14	10	9.9	9.9
18	14	15	45	153	58	48	87	105	15	8.4	14	11
19	15	13	40	115	56	48	83	91	16	7.6	12 9.9	11 10
20	9.4	14	154	94	45	62	75	85	14	7.6	9.9	10
21	8.4	13	87	98	46	133	89	75	21	7.3	9.4	11
22	8.0	13	68	247	328	153	274	68	65	7.0	68	8.0 7.6
23	7.6	12	96	250	166	151	219	62	26	5.9	72	7.0
24	8.7	12	86	246	127	136	161	55	16	5.9	38	7.6
25	9.9	12	67	430	108	160	135	51	14	5.2	28	6.6
26	9.9	14	45	282	103	144	118	46	12	5.2	24	6.6
27	12	12	43	197	84	108	147	44	12	5.6	32	5.9 6.2
28	12	11	46	152	84	94	167	45	12	5.2	28	0.2
29	10	10	38	136		83	133	38	15	5.2	21	7.3
30	9.4	10	35	117		7 5	108	34	14	5.2	18	7.6
31	9.4		50	117		70		31		6.2	16	

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	18	5.4	9.21	0.201	0.23
November	84	7.6	16.6	.362	.40
December	154	10	63.0	1.38	1.59
	430	45	119	2.60	3.00
January	328	45	86.1	1.88	1.96
February	160	48	85.4	1.86	2.14
March	274	54	107	2.34	2.61
April	161	31	74.6	1.63	1.88
May	65	12	21.0	.458	.51
June	20	5.2	8.66	.189	.22
July	79	4.4	22.2	.485	.56
August			10.9	.238	.27
September	31	5.9	10.9	.200	
The year	430	4.4	51.8	1.13	15.37

West Branch of Susquehanna River at Bower, Pa.

Location. - Water-stage recorder, lat. 40°53'50", long. 78°40'40", at highway bridge at Bower, Clearfield County, 4.8 miles below Mahaffey and mouth of Chest Creek. Zero of gage is 1,206.39 feet above mean sea level.

Drainage area. - 315 square miles.

Prainage area. - 315 square miles.

Records available. - October 1918 to September 1921, October 1931 to September 1937

in reports of U. S.Geological Survey; October 1913 to September 1937 in reports

of Pennsylvania Department of Forests and Waters.

Average discharge. - 24 years, 564 second-feet.

Extremes. - Maximum discharge during year, 7,520 second-feet Jan. 22 (gage height,

11.81 feet); minimum, 44 second-feet Sept. 30 (gage height, 4.05 feet).

1913-37: Maximum discharge, 31,500 second-feet Mar. 18, 1936 (gage height,

19.74 feet, from floodmark in gage shelter), from rating curve extended on basis
of slope-area determination; minimum, 16 second-feet Sept. 29, Oct. 1, 6, 13,

of stope-area determination; minimum, 16 second-feet Sept. 29, Oct. 1, 6, 13, 1930 (gage height, 3.66 feet).

Remarks.- Records good except those for period of ice effect and for periods of recorder failure, which are fair. Discharge for period of ice effect, Nov. 29 to Dec. 7, determined from gage heights, weather records, and by comparison with records for stations downstream. Discharge for periods of recorder failure, Oct. 1, May 28 to June 11, July 17, 18, Aug. 2, 26-28, determined by comparison with records for stations mentioned above. Some regulation at low stages from power operations unstream power operations upstream.

Daily and monthly discharge, in second-feet, 1936-37

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	400	269	98	1,550	848	332	390	1,370	270	115	77	186
2	652	357	96	1,300	578	346	390	1,030	220	112	70	154
3	392	679	95	1,510	448	344	356	799	200	157	64	133
4	265	1,960	97	1,310	380	582	312	650	180	123	55	123
6	203	4,810	100	997	386	1,680	328	595	180	99	54	222
6	176	2,680	140	799	356	1,300	524	1,970	160	90	84	203
7	178	1,630	1,300	892	344	1,030	479	1,260	140	81	101	152
8	171	1,170	894	1,510	384	887	413	932	130	72	69	117
9	217	900	727	1,470	936	793	808	769	120	69	69	99
10	899	697	628	1,870	782	583	926	650	110	70	81	90
11	805	546	896	2,160	474	508	727	525	130	90	288	94
12	551	460	1,510	1,630	466	448	685	440	117	143	254	131
13	395	399	1,140	1,240	428	417.	525	508	98	85	152	105
14	298	356	887	1,260	427	365	494	1,210	380	81	130	85
15	239	332	739	2,140	395	340	1,620	835	384	141	82	77
16	211	298	616	1,800	356	305	1,390	685	202	179	71	72
17	1,530	259	775	1.340	286	279	1,060	655	143	1,000	63	70
18	2,200	255	697	2,900	273	294	874	568	154	800	70	65
19	1,340	220	541	2,550	262	301	727	474	159	417	106	65
20	894	206	1,730	1,800	262	766	584	408	135	269	90	61
21	638	203	1,380	3,440	325	2,750	664	365	244	200	71	59
22	489	194	1,060	6.950	875	1.780	2,250	336	1,250	157	136	55
23	408	178	781	4,840	739	1,280	2,160	328	581	139	117	55
24	399	174	721	3.130	589	997	1,510	294	340	279	101	51
25	344	158	661	5,860	536	1,120	1,460	245	242	254	79	51
26	471	168	823	3,730	408	1,140	4,790	217	189	192	600	51
27	628	136	1,130	2,050	417	829	5,020	358	164	156	1,300	50
28	436	129	2,020	1,390	332	715	6,100	700	157	117	800	50
29	378	130	1,590	1,100		611	3,490	580	141	101	520	45
30	344	110	1,260	894		520	2,020	450	119	88	336	46
31	298		1,890	799		450		350		82	239	
		Мог	nth		Ma	ximum	Minimo	184	Mean	Per squarile		n-off in inches
	_					2,200 4,810	17		5 44 669	2.1		1.99 2.36
					1	2,020	9		872	2.7		3.19
						6,950	79		.136	6.7		7.82
-						936	26		475	1.5		1.57
					• •	2,750	27		777	2.4		2.85
						6,100	31		436	4.5		5.09
						1,970	21		663	2.1		2.42
						1,250	_	8	235	7		.83
						1,000	6	_	192		io	.70
						1,300	5	-	204		48	.75
						222	4		93.9		98	.33
												29.90

West Branch of Susquehanna River at Renovo, Pa.

Location. - Water-stage recorder, lat. 41°18'50", long. 77°44'45", at highway bridge at Renovo, Clinton County. Zero of gage is 634.03 feet above mean sea level.

at Renovo, Clinton County. Zero of gage is 634.03 feet above mean sea level.

Drainage area. - 2,975 square miles.

Records available. - October 1919 to September 1921, October 1931 to September 1937

in reports of U. S. Geological Survey; July 1895 to December 1903, October 1905

to September 1937 in reports of Pennsylvania Department of Forests and Waters.

Average discharge. - 25 years (1908-15, 1919-37), 4,776 se ind-feet.

Extremes. - Maximum discharge during year, 63,800 second-feet Apr. 28 (gage height, 13.21 feet); minimum, 370 second-feet Aug. 7 (gage height, 0.11 foot).

1895-1903, 1905-37: Maximum discharge, 236,000 second-feet Mar. 18, 1936 (gage height, 29.39 feet, from floodmark in gage shelter), from rating curve extended on basis of slope-area determination; minimum, 80 second-feet Dec. 6, 1908 (gage height, -1.10 feet).

Maximum flood known prior to 1895, 27.3 feet, from floodmark, June 1, 1889 (discharge, about 211,000 second-feet).

(discharge, about 211,000 second-feet).
Remarks. - Records good except those for period of ice effect, Nov. 29 to Dec. 9, which are fair and were determined from gage heights, weather records, and by comparison with records for stations at Bower and Williamsport.

Day	Oct.	Nov.	Dec.	Jan.	Feb		Mar.	Apr.	May		June	July	Aug		Sept.
1	635	2,000	1,100	22,000	8,0	50	3,050	4,080	20,9	00	3,160	1,510	63	4	2,230
2	2,380	1,930	1,000	17,400	7,1		3,160	3,830	15,0		2,760	1,390	57	0	1,850
3	2,360	2,460	1,000	14,200	5,6	00	2,950	3,710	11,7	00	2,480	1,300	51	.6	1,600
	1,540	4,760	1,100	12,500	4,3	30	3,050	3,480	9,2		2,570	1,260	45		1,760
5	1,160	25,900	1,300	10,500	4,0	80	4,730	3,370	7,8		2,230	1,160	41		1,830
6	950	26,500	1,600	8,150	3,8	30	8,730	4,760	9,6	20	2,000	1,100	38		2,08
7	798	16,800	1,800	6,950	3,4	80	7,550	8,050	13,3		2,000	950	46		2,00
8	710	12,100	1,700	7,510	3,3		6,800	7,550	11,3		1,750	838	1,03	50	1,69
9	663	9,450	2,500	10,500	3,6	00	6,350	8,020	9,6		1,540	759	88		1,45
10	769	7,550	3,260	11,700	5,0	10	5,600	10,500	8,4		1,480	730	99	99	1,24
11	1,260	6,200	3,370	14,200	4,6	00	4,730	10,200	7,1	00	1,800	797	2,38	30	1,11
12	2,780	5,010	5,770	14,200	3,3		4,080	8,580	6,0	50	1,590	1,360	2,80	00	1,09
13	1,930	4,330	8,920	11,700	3,2	60	3,830	7,550	5,7		1,390	1,510	3,3'	70	1,08
14	1,490	3,710	7,400	10,500	3,3		3,600	6,800	10,4		1,420	1,110	2,48		98
15	1,260	3,480	6,500	15,600	3,3	70	3,260	7,250	12,9		2,540	1,080	1,72	90	95
16	1,090	3,260	5,750	19,400	3,1	.60	3,050	10,200	11,3		3,260	2,180	1,30		84
17	1,300	2,850	5,600	15,000	2,7	760	2,760	9,800	9,8	00	2,310	2,800	1,13		78
18	6,280	2,570	6,050	14,200	2,4		2,660	8,580	8,7	50	2,000	2,790	1,0		73
19	8;460	2,310	5,600	19,400	2,4		2,570	7,550	7,7		2,080	3,440	9	50	68
20	5,600	2,080	7,260	17,400	2,3		2,660	6,650	6,8	00	2,310	2,310	80	88	63
21	3,950	2,080	12,900	18,400	2,2	230	4,560	6,200	5,9	00	2,230	1,680		98	59
22	3,050	2,000	10,900	46,800	3,5		10,200	9,460	5,1	60	7,650	1,350	1,0		56
23	2,480	1,930	8,920	53,300	5,1		8,050	20,500	4,7		7,400	1,160	1,6	SO	53
24	2,230	1,850	7,250	33,600	5,3		6,950	18,400	3,0	50	5,600	1,040	1,5	ro	51
25	2,150	1,730	6,500	40,900	4,7	730	6,650	14,200	3,7	10	3,830	961	1,3	50	49
26	2,080	1,640	6,050	43,800	4,0	080	8,050	17,500	3,2		2,850	1,110	1,5	70	45
27	2,230	1,550	6,650	29,000	3,8	330	7,880	45,400	3,0	50	2,310	1,370	5,0		43
28	2,760	1,640	11,000	18,400	3,1	160	6,800	59,500	4,4		2,150	1,080	9,1		43
29	2,480	1,500	16,000	13,700			5,900	52,600	5,1	60	1,860	981	5,4		40
30	2,150	1,250	14,200	10,900			5,160	32,200	4,6	00	1,630	808	3,3	70	41
31	2,080		16,200	9,100			4,600		3,8	30		710	2,8		
		Mo	nth			Max	zimum	Minim	um	1	Mean	Per square	are 1		off i
Oct	ober					8	,460	635			,292	0.77			.89
Nov	ember						,500	1,250			,414	1.82			.44
Deo	ember						,200	1,000			,295	2.12			.39
Jan	uary						,300	6,950			,060	6.41			.40
							050	2,230			,986	1.34			.99
							,200	2,570			,160	1.73			.21
							,500	3,370			,880	4.67			.14
May							900	3,050			,079	2.72		_	_
Jun	0,						650	1,390			,673	.89		1	.00
							440	710			,375	.46			•53
Aug	ust					9	2,100	386			,871 .049	.62 .35			.73
SAD	TOMDER						,,~~								

West Branch of Susquehanna River at Lock Haven, Pa.

Location. - Chain gage, lat. 41°08'20", long. 77°26'30", at Jay Street Bridge, Lock Haven, Clinton County. Zero of gage is 535.00 feet above mean sea level.

Drainage area. - 3,338 square miles.

Records available. - October 1913 to August 1923, August 1925 to September 1937.

Extremes. - Maximum gage height during year, 16.50 feet Apr. 28; minimum, 4.65 feet

Oct. 1.

1913-23, 1925-37: Maximum gage height, 32.28 feet, from floodmark,
Mar. 18, 1936; minimum, 0.60 foot Sept. 25, 1932.

Remarks.- Records fair. Gage heights are obtained at this station for floodwarning purposes. Discharge is not determined.

Daily mean gage height, in feet, 1936-37

Day	Oot.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
	4.78	8.08	7.67	11.18	9.24	8.62	8,60	11.27	8.58	7.91	7.57	8.28
1	5.09	8.04	7.51	10.80	9.12	8.58	8.50	10.42	8.31	7.86	7.55	8.12
3	8.05	8.06	7.56	10.25	8.88	8.56	8.52	9.88	8.25	7.86	7.51	8.04
4	7.71	8.41	7.63	10.05	8.72	8.52	8.46	9.54	8.21	7.85	7.46	7.98
5	7.37	11.14	7.86	9.69	8.42	8,60	8.44	9.18	8.19	7.82	7.45	7.92
6	6.84	11.96	7.89	9.33	8.42	9.14	8.56	9.42	8.12	7.77	7.49	8.12
7	6.21	10.81	7.89	9.13	8.42	9.14	9.26	10.11	8.04	7.74	7.48	8.12
8	5.79	10.06	7.81	9.10	8.80	9.04	9.28	9.84	7.98	7.69	7.61	8.02
9	5.49	9.55	8.13	9.55	9.04	8.94	9.32	9.58	7.94	7.65	7.74	7.92
10	5.46	9.23	8.36	9.76	9.14	8.88	9.68	9.35	7.91	7.62	7.66	7.84
11	6.06	8.99	8.46	10.08	9.17	8.78	9.72	9.12	7.91	7.65	8.08	7.79
12	7.72	8.77	8.83	10.33	9.00	8.62	9.45	8.98	7.94	7.64	8.34	7.76
13	7.93	8.66	9.33	9.86	8.77	8.55	9.28	8.88.	7.90	7.91	8.62	7.78
14	7.57	8.50	9.29	9.63	8.69	8.54	9.15	9.28	7.89	7.84	8.38	7.76
15	7.22	8.43	9.05	10.13	8.67	8.48	9.12	10.10	8.00	7.74	8.12	7.70
16	6.92	8.48	8.93	10.88	8.67	8.38	9.40	9.78	8.26	7.98	7.92	7.69
17	7.58	8.36	8.86	10.48	8.63	8.29	9.64	9.62	8.25	8.39	7.85	7.66
18	8.10	8.26	8.90	10.27	8.62	8.28	9.38	9.45	8.06	8.25	7.81	7.61
19	9.50	8.16	8.89	10.89	8.62.	8.30	9.22	9.23	8.11	8.46	7.75	7.60
20	8.90	8.05	8.86	10.80	8.60	8.26	9.09	9.06	8.14	8.22	7.72	7.60
21	8.58	8.08	9.89	10.58	8.57	8.38	9.05	8.92	8.10	8.02	7.69	7.56
22	8.38	8.02	9.81	14.18	8.52	9.35	9.18	8.82	8.82	7.92	7.72	7.54
23	8.24	8.02	9.43	15.62	8.70	9.24	10.85	8.72	9.08	7.82	7.82	7.52
24	8.13	8.02	9.23	12.73	8.78	9.02	10.97	8.62	8.90	7.76	7.98	7.50
25	8.11	7.97	9.03	12.59	8.72	9.01	10.57	8.52	8.57	7.72	7.88	7.50
26	8.09	7.95	8.96	13.95	8.64	9.18	10.33	8.40	8.39	7.75	8.02	7.4
27	8.08	7.85	8.96	12.11	8.56	9.28	13.40	8.39	8.22	7.82	8.98	7.4
28	8.19	7.79	9.39	11.00	8.37	9.06	15.51	8.55	8.12	7.85	9.52	7.4
29	8.24	7.75	10.44	10.36		8.92	15.57	8.68	8.04	7.69	9.00	7.4
30	8.14	7.75	10.27	9.80		8.74	12.79	8.58	7.98	7.69	8.62	7.4
31	8.07		10.24	9.45		8.69		8.48		7.63	8.38	1

West Branch of Susquehanna River at Williamsport, Pa.

Location. - Water-stage recorder, lat. 41°14'15", long. 76°59'55", at highway bridge at Williamsport, Lycoming County. Zero of gage is 494.55 feet above mean sea level.

Drainage area. - 5,682 square miles.

Records available. - March 1895 to December 1913, October 1918 to September 1921,
October 1931 to September 1937 in reports of U. S. Geological Survey; March 1895
to September 1937 in reports of Pennsylvania Department of Forests and Waters.

Average discharge. - 42 years, 8,897 second-feet.

Extremes. - Maximum discharge during year, 95,000 second-feet Jan. 24 (gage height,
16.74 feet); minimum, 995 second-feet Aug. 7.

1895-1937: Maximum discharge, 264,000 second-feet Mar. 18, 1936 (gage
height, 33.57 feet, from floodmark in gage shelter), from rating curve extended
on basis of slope-area determination; minimum, 231 second-feet Sept. 12, 13,
1932 (gage height, -0.42 foot); minimum daily discharge, 250 second-feet June
30, July 10, 1912.

Maximum flood known prior to 1895, 32.4 feet June 1, 1889 (discharge,
about 252,000 second-feet).

about 252,000 second-feet).

Remarks. - Records fair. Slight regulation at low stages from power operations

Day	Oot.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,070	3,700	1,780	30,900	15,500	6,560	7,900	37,500	6,130	2,800	1,640	6,700
2	1,260	3,460	1,640	29,800	13,100	6,410	7,590	27,600	5,440	2,640	1,340	5,310
3	2,370	3,460	1,530	24,900	10,900	6,700	7,440	21,400	4,920	2,530	1,240	4,420
4	3,130	5,520	1,850	21,900	8,530	6,560	7,290	17,300	4,920	2,390	1,150	4,050
5	2,290	30,400	2,210	18,200	7,440	8,210	6,990	14,700	4,660	2,230	1,090	4,170
6	1,780	44,600	2,570	15,100	7,440	10,900	9,840	15,500	4,050	1,960	1,020	4,420
7	1,580	31,100	2,700	12,700	7,290	12,700	17,300	20,000	3,700	1,780	1,200	4,420
8	1,370	21,900	2,680	12,000	6,990	11,600	17,300	20,500	3,460	1,640	1,460	3,930
9	1,240	17,300	2,700	13,900	6,840	10,900	17,300	17,700	3,020	1,460	1,750	3,350
10	1,240	13,900	4,420	16,400	7,590	9,850	21,400	15,500	2,800	1,410	2,180	2,800
11	1,250	11,600	5,440	19,100	7,900	8,530	20,900	13,500	2,700	1,460	6,880	2,530
12	1,410	9,510	8,990	20,900	6,410	7,590	18,200	11,600	3,020	1,360	8,210	2,350
13	3,180	8,210	13,100	19,100	5,850	7,290	16,000	10,900	2,700	1,670	9,180	2,180
14	2,800	7,290	13,100	16,800	6,270	6,840	13,900	13,600	2,620	2,160	7,590	2,050
15	2,230	6,560	11,600	20,000	6,270	6,410	13,900	20,000	2,800	1,990	5,440	1,920
16	1,920	6,130	10,200	28,700	6,130	5,990	16,000	20,900	3,350	2,700	3,930	1,840
17	2,190	5,580	10,200	27,100	5,310	5,310	17,700	18,600	3,350	3,600	3,020	1,800
18	5,990	4,920	10,500	24,900	4,920	5,180	16,000	17,300	3,350	4,170	2,800	1,670
19	11,000	4,420	9,850	29,200	4,420	5,050	14,300	15,100	3,350	3,930	2,430	1,590
02	9,910	3,930	12,000	30,400	4,420	5,180	12,700	13,500	3,460	4,290	2,350	1,460
21	7,290	3,700	17,700	27,100	4,520	6,270	11,600	12,000	3,700	3,130	2,140	1,370
22	5,440	3,580	19,100	49,000	14,200	10,200	15,800	10,500	5,990	2,370	2,660	1,330
23	4,540	3,460	16,000	91,000	14,700	13,500	28,500	9,510	10,900	1,970	2,800	1,300
24	4,170	3,350	13,500	65,800	13,100	11,600	35,000	8,850	9,280	1,770	3,460	1,250
25	4,050	3,130	12,000	50,900	11,600	10,900	27,600	7,740	7,140	1,700	3,130	1,210
26	3,930	2,910	10,900	69,100	10,200	12,400	23,400	6,840	5,310	1,590	3,080	1,170
27	4,050	2,620	10,900	52,400	8,850	12,700	43,900	6,410	4,290	1,730	13,600	1,100
28	4,170	1,970	13,100	35,000	7,590	12,000	71,800	6,990	3,930	1,920	22,400	1,120
29	4,540	2,140	20,000	26,000		10,500	85,100	8,210	3,700	1,770	16,400	1,120
30	4,170	2,010	21,400	20,900		9,470	57,000	7,900	3,350	1,610	10,500	1,110
31	3,810		20,900	17,300		8,530		7,140		2,060	7,740	

Month	Maximum	Minisus	Mean	Per square mile	Run-off in inches
October	11,000	1,070	3,528	0.621	0.72
November	44,600	1,970	9,079	1.60	1.78
December	21,400	1,530	9,825	1.73	1.99
January	91,000	12,000	30,210	5.32	6.13
February	15,500	4.420	8,367	1.47	1.53
March	13,500	5.050	8.769	1.54	1.78
April	85,100	6,990	22,660	3.99	4.45
May	37,500	6,410	14,670	2.58	2.97
June	10.900	2,620	4,380	.771	.86
July	4,290	1,360	2,251	.396	.46
August	22,400	1,020	4,962	.973	1.01
September	6,700	1,100	2,501	.440	.49
The year	91,000	1,020	10,120	1.78	24.17

Clearfield Creek at Dimeling, Pa.

Location. - Water-stage recorder, lat. 40°58'15", long. 78°24'25", at highway bridge at Dimeling, Clearfield County, 400 feet below mouth of Little Clearfield Creek. Zero of gage is 1,145.56 feet above mean sea level.

Drainage area. - 371 square miles.

Prainage area. - 371 square miles.

Records available. - October 1918 to September 1921, October 1931 to September 1937

In reports of U. S. Geological Survey; October 1913 to September 1937 in reports of Pennsylvania Department of Forests and Waters.

Average discharge. - 24 years, 583 second-feet.

Extremes. - Maximum discharge during year, 11,800 second-feet Apr. 27 (gage height, 12.39 feet), from rating curve extended above 6,000 second-feet; minimum, 30 second-feet Sept. 26 (gage height, 3.40 feet); minimum daily discharge, 48 second-feet Sept. 26.

1913-37: Maximum discharge, 37,600 second-feet Mar. 18, 1936 (gage height, 18.49 feet, from floodmark in gage shelter), from rating curve extended above 6,000 second-feet; minimum, 6 second-feet Oct. 1, 9, 1926 (gage height, 3.15 feet); minimum daily discharge, 7.1 second-feet Oct. 1, 1925.

Remarks.- Records good except those for extremely high stages and for periods of ice effect and recorder failure, which are fair. Discharge for periods of ice effect, Dec. 6-12, Feb. 27 to Mar. 4, Mar. 11-13, determined from gage heights weather records and by comparison with records for stations in adjacent heights, weather records, and by comparison with records for stations in adjacent drainage areas. Discharge for periods of recorder failure, Nov. 17-20, Nov. 26 to Dec. 5, Feb. 2-6, determined by comparison with records for stations mentioned above. Some regulation at low stages from power operations upstream.

Daily and monthly discharge in second-fact 1936-37

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	960	273	130	1,620	995	380	493	1,880	276	95	78	270
2	716	304	125	1,250	700	370	469	1,370	248	90	73	220
3	404	507	120	1,290	540	380	450	1,060	226	130	69	186
4	274	1,510	120	1,330	440	500	393	870	223	100	66	185
5	206	5,640	130	995	420	1,670	389	755	226	85	64	283
6	171	3,200	160	820	380	1,490	512	1,540	186	75	87	307
7	159	1,830	500	801	414	1,170	588	1,230	173	68	100	267
8	156	1,290	1,400	1,380	450	1,060	488	940	161	62	80	139
9	162	995	1,200	1,700	692	995	948	864	141	60	73	151
10	300	790	1,100	2,000	716	769	1,250	755	138	59	96	132
11	368	631	1,000	2,850	435	600	934	631	150	82	216	130
12	306	532	1,500	1,980	389	540	808	542	130	88	325	154
13	238	469	1,290	1,490	419	510	703	572	115	71	248	168
14	195	424	960	1,370	414	488	636	1,250	241	70	206	128
15	168	393	814	1,620	410	450	1,250	947	292	101	138	106
16	154	364	708	1,490	372	419	1,480	784	203	145	102	95
17	1,480	330	912	1,170	311	376	1,060	726	145	698	86	90
18	2,460	300	914	2,150	297	376	902	658	128	774	90	86
19	1,280	270	708	2,550	325	372	778	573	132	371	110	84
20	845	248	1,400	1,840	283	674	664	497	145	251	153	83
21	620	244	1,450	2,410	320	2,210	686	437	150	189	94	77
22	488	241	1,100	6,830	1,120	1,800	1,580	397	496	168	117	71
23	410	223	803	5,760	1,060	1,290	2,020	406	438	145	228	67
24	368	209	714	3,450	808	1,060	1,490	397	229	136	211	64
25	348	189	737	5,420	737	1,100	1,290	322	163	162	141	62
26	369	200	808	3,990	568	1,290	5,020	283	134	178	1,300	48
27	568	180	1,030	2,360	480	928	11,200	344	120	234	2,310	54
28	410	170	1,850	1,620	420	796	10,000	609	113	154	1,230	54
29	345	170	1,700	1,290		714	5,690	537	115	115	656	54
30	322	150	1,370	1,060		620	2,880	402	110	95	446	50
31	300		1,660	940		552		318		86	341	
		Mor	nth		Me	ximum	Minimu	um 1	Mean	Per squa		off in
Oct	ber					2,460	154		502	1.35		1.56

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	2,460	154	502	1.35	1.56
November	5,640	150	743	2.00	2.23
December	1,850	120	917	2.47	2.85
January	6,830	801	2,156	5.81	6.70
February	1,120	283	533	1.44	1.50
March	2,210	370	837	2.26	2.61
April	11,200	389	1,902	5.13	5.72
May	1,880	283	739	1.99	2.29
June	496	110	192	.518	.58
July	774	59	166	.447	.52
August	2,310	64	308	.830	.96
September	307	48	130	.350	.39
The year	11,200	48	762	2.05	27.91

Driftwood Branch of Sinnemahoning Creek at Sterling Run, Pa.

Location. - Staff gage, lat. 41°24'30", long. 78°11'25", 800 feet above highway bridge at Sterling Run, Cameron County, and 1,100 feet above mouth of Sterling Run. Zero of gage is 894.60 feet above mean sea level.

Drainage area. - 281 square miles.

Drainage area. 281 square miles.

Records available. November 1918 to September 1921, October 1931 to September 1937

in reports of U. S. Geological Survey; September 1913 to September 1937 in reports of Pennsylvania Department of Forests and Waters.

Average discharge. 18 years (1919-37), 447 second-feet.

Extremes. Maximum discharge during year, 10,100 second-feet Jan. 22 (gage height, 7.37 feet, from recorder graph and relation curve), from rating curve extended on basis of slope-area determination; minimum, 5.1 second-feet Oct. 7 (gage height 117 feet) height, 1.17 feet).
1913-37) Maximum discharge, 28,400 second-feet Mar. 17, 1936 (gage height,

13.0 feet, from graph based on gage readings), from rating curve extended on basis of slope-area determination; minimum, 0.4 second-foot Sept. 7, 12-14,

Remarks .- Records fair. Discharge for periods of ice effect, Nov. 28 to Dec. 12, Feb. 4-8, Feb. 24 to Mar. 4, determined from gage heights, weather records, and by comparison with records for stations in adjacent drainage areas. Discharge for high stages determined from graphs based on gage readings. Slight regulation from power operations upstream.

ay	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
	23	94	68	2,760	483	160	241	1,540	312	130	45	92
2	40	155	66	1,910	371	160	258	1,040	249	112	39	83
3	22	398	66	1,210	275	160	266	762	224	118	36	87
4	10	1,140	68	894	240	170	249	578	186	103	30	96
5	6.0	2,950	75	648	220	412	275	514	159	87	26	142
6	5.4	1,520	90	514	210	425	606	1,100	193	77	30	125
7	5.4	894	150	514	200	398	723	1,100	159	71	76	96
8	5.4	684	350	684	210	371	648	894	136	59	128	79
9	6.0	514	300	847	346	346	762	684	110	52	67	63
10	30	425	270	1,210	312	224	847	612	194	56	282	52
11	105	321	300	1,040	224	220	723	483	186	218	789	56
12	52	284	850	940	275	224	612	398	125	366	425	6
13	32	249	684	723	289	249	514	510	108	179	371	5
14	26	220	612	2,030	262	173	483	1,620	195	133	212	3
15	23	254	454	4,960	245	190	739	1,620	454	147	159	33
16	19	212	425	3,220	224	173	940	1,210	293	972	120	30
17	91	193	454	1,690	153	162	847	1,040	241	545	94	3
18	197	162	425	1,850	136	159	684	762	312	346	115	2
19	120	125	1,130	1,940	173	159	578	684	556	275	92	2:
20	79	159	2,200	1,540	147	176	514	578	454	209	75	20
21	63	159	1,620	3,570	166	346	618	483	767	159	79	2:
22	52	147	1,040	9,180	371	312	2,370	398	2,980	136	219	2:
23	49	136	723	5,350	316	298	3,370	483	1,290	118	224	2:
24	59	130	612	2,960	260	303	1,940	371	723	101	153	2:
25	96	110	483	7,620	220	371	1,270	321	454	92	120	2
26	101	125	514	4,870	200	424	1,800	303	303	130	144	2
27	193	96	684	2,390	180	346	3,800	388	232	87	166	2
28	125	85	1,880	1,340	170	346	7,660	762	224	75	120	2 2
29	110	76	1,600	894		312	5,460	612	166	61	96	2
30	120	72	1,400	684		280	2,760	483	159	54 49	79 125	2
31	115		2,820	612		245		371.		49	120	

31	115	2,820	612	245		57J.	49	120
		Month		Maximum	Minimum	Mean	Per square mile	Run-off in inches
Nove Decident January February Mark Apri May June	ember			197 2,950 2,820 9,180 483 425 7,660 1,620 2,980 972	5.4 72 66 514 147 160 241 303 110 49	63.9 403 723 2,277 246 268 1,419 732 405 172	0.227 1.43 2.57 8.10 .875 .954 5.05 2.60 1.44 .612	0.26 1.60 2.96 9.34 .91 1.10 5.63 3.00 1.61
				789 142	26 21	153 50.9	.544	.63
	The year.			9,180	5.4	579	2.06	27.95

21.33

1.53

North Bald Eagle Creek at Beech Creek Station, Pa.

Location. - Water-stage recorder, lat. 41°03'55", long. 77°34'00", at highway bridge just below mouth of Beech Creek, at Beech Creek Station, Clinton County. Zero of gage is 571.79 feet above mean sea level.

Drainage area. - 559 square miles.

Drainage area. - 559 square miles.

Records available. - October 1918 to September 1921, October 1931 to September 1937

In reports of U. S. Geological Survey; June 1910 to September 1937 in reports of Pennsylvania Department of Forests and Waters.

Average discharge. - 27 years, 794 second-feet.

Extremes. - Maximum discharge during year, 10,000 second-feet Apr. 28 (gage height, 8.88 feet); minimum, 96 second-feet Oct. 6 (gage height, 1.42 feet); minimum daily discharge, 148 second-feet Oct. 16.

1910-37: Maximum discharge, 22,300 second-feet Mar. 18, 1936 (gage height, 14.42 feet); from rating curve extended above 10,000 second-feet); minimum, 15 second-feet Jan. 9, 1931 (gage height, 1.12 feet); minimum daily discharge (estimated), 25 second-feet Jan. 22, 23, 1931.

Remarks. - Records fair. Discharge for period of ice effect, Nov. 29 to Dec. 3, determined from gage heights, weather records, and by comparison with records for stations in adjacent drainage areas. Discharge for period of recorder failure, May 28-30, determined by comparison with records for stations mentioned above. Some regulation at low stages from operation of gristmills upstream.

Daily and monthly discharge, in second-feet, 1936-37

ay	Oot.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	407	398	260	1,640	1,340	691	756	2,480	527	288	196	533
2	291	412	290	1,440	1,090	684	734	1,980	509	283	188	452
3	202	480	360	1,490	950	705	705	1,640	509	292	179	444
4	178	1,600	373	1,340	847	793	663	1,390	515	278	177	642
5	160	4,520	352	1,110	862	1,070	656	1.290	475	265	187	603
6	148	2,280	358	990	778	1,040	1,080	1,920	447	252	200	623
7	156	1,590	604	966	741	1,010	1,240	1,490	425	236	278	504
8	154	1,240	484	1,110	734	974	1,160	1,290	409	231	350	439
9	157	1,030	556	1,160	808	950	1,780	1,200	389	236	310	386
10	176	886	499	1,580	855	839	1,810	1,110	394	265	316	348
1.	184	756	704	1,860	663	771	1,590	1,010	394	257	867	348
lz	178	684	1,420	1,640	636	726	1,390	934	368	261	515	378
13	167	642	1,160	1,440	636	719	1,200	1,020	348	244	492	329
14	158	596	958	1,390	670	684	1,110	1,590	368	233	399	292
15	153	577	862	1,440	698	670	1,240	1,390	389	362	329	274
16	148	552	808	1,240	649	649	1,160	1,290	353	372	288	255
17	1,120	509	1,050	1,160	583	623	1,020	1,240	324	366	261	262
18	1,260	492	1,010	2,080	564	629	990	1,160	344	301	276	252
19	720	447	855	2,340	558	642	934	1,050	349	283	252	244
os	571	441	1,410	1,980	546	793	878	974	324	257	240	238
21	478	436	1,390	2,240	576	1,200	926	894	331	236	220	215
22	436	420	1,160	5,930	1,750	1,050	1,530	847	486	227	248	217
23	423	399	982	5,520	1,240	990	1,980	793	389	227	413	208
45	489	389	910	3,780	1,050	958	1,810	749	339	223	296	208
75	425	363	894	4,660	998	1,030	1,640	670	324	231	252	188
85	499	384	902	4,170	855	1,240	2,620	623	306	281	668	200
27	578	339	990	2,950	824	1,050	6,990	609	296	274	2,700	198
85	474	346	1,240	2,220	705	998	9,170	596	320	231	1,160	206
9	450	330	1,240	1,860		934	5,720	583	315	211	778	193
30	440	300	1,160	1,590		870	3,390	577	288	207	609	192
31	426		1,670	1,440		808		552		206	700	

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	1,260	148	381	0.682	0.79
November	4,520	300	795	1.42	1.58
December	1,670	260	868	1.55	1.79
January	5,930	966	2,121	3.79	4.37
February	1,750	546	829	1.48	1.54
March	1,240	623	864	1.55	1.79
April	9,170	656	1,929	3.45	3.85
May	2,480	552	1,127	2.02	2.33
June	527	288	385	.689	.77
July	372	206	262	.469	.54
August	2.700	177	463	.828	•95
September	642	188	329	.589	.66
The year	9,170	148	863	1.54	20.96

Pine Creek at Cedar Run, Pa.

Location. - Water-stage recorder, lat. 41°31'20", long. 77°26'55", at highway bridge at Cedar Run, Lycoming County, about 2,000 feet below mouth of Cedar Run. Zero of gage is 781.96 feet above mean sea level.

Drainage area. - 604 square miles.

Records available. - October 1918 to September 1921, October 1931 to September 1937

in report of U. S. Geological Survey; July 1918 to September 1937 in reports

of Pennsylvania Department of Forests and Waters.

Average discharge. - 18 years (1919-37), 749 second-feet.

Average discharge. - 18 years (1919-37), 749 second-feet.

Extremes. - Maximum discharge during year, 12,300 second-feet Aug. 27 (gage height, 7.23 feet), from rating curve extended on basis of slope-area determination; minimum, 42 second-feet Aug. 6 (gage height, 1.11 feet).

1918-37: Maximum discharge, 30,900 second-feet Mar. 18, 1936 (gage height, 11.39 feet), from rating curve extended on basis of slope-area determination; minimum, 5.1 second-feet Sept. 6, 1929 (gage height, 0.86 foot).

Remarks. - Records good except those for periods of ice effect, Nov. 28 to Dec. 12, Feb. 4-13, Mar. 1-3, 11-13, which are fair and were determined from gage heights, weather records, and by comparison with records for stations in adjacent drain-age areas.

age areas.

Daily and monthly discharge, in second-feet, 1936-37

Day	Oot.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1 2 3 4 5	122 128 102 80 71	464 464 629 2,250 5,970	270 260 450 450 350	3,780 3,050 2,670 2,040 1,500	1,220 987 798 700 620	500 460 440 569 1,270	618 720 808 759 828	2,440 2,020 1,640 1,350 1,190	427 389 374 427. 332	203 182 172 168 143	78 70 58 52 47	646 502 399 363 494
6 7 8 9	65 62 62 62 80	4,120 2,960 2,340 1,940 1,620	320 350 310 290 400	1,220 1,060 1,120 1,220 1,300	570 520 520 540 560	870 749 749 769 601	3,110 3,050 2,370 2,760 2,490	2,390 2,350 2,170 1,850 1,540	305 286 237 214 226	130 114 105 94 106	44 56 105 98 428	506 349 288 250 221
11 12 13 14 15	250 200 162 149 137	1,310 1,110 976 870 870	600 1,100 922 818 860	1,220 1,180 1,100 1,700 3,520	500 540 430 434 449	500 450 404	2,050 1,800 1,660 1,540 2,010	1,270 1,080 1,150 2,050 2,290	298 214 182 254 601	114 118 94 87 100	1,490 814 731 410 283	204 204 184 163 149
16 17 18 19 20	128 487 1,090 734 587	779 655 592 490 490	798 944 891 789 1,440	3,780 2,860 3,050 2,760 2,290	389 381 596 542 389	381 374 353	2,200 2,040 1,850 1,600 1,380	2,200 2,390 2,090 1,760 1,500	280 305	153 158 122 105 94	208 175 153 139 122	140 140 131 118 113
21 22 23 24 25	493 422 388 478 508	490 465 419 396 374	1,500 1,340 1,180 1,110 998	3,050 7,400 6,610 4,240 5,430	324 1,290 849 740 692	720 818 789	1,540 3,390 4,470 3,560 2,760	1,290 1,120 1,020 860 730	756 498 404	84 76 66 73 61	114 247 434 261 214	105 94 90 90 83
26 27 28 29 30 31	478 563 523 500 515 515	381 381 330 300 280	1,050 1,260 1,950 2,100 2,020 3,510	4,830 3,460 2,490 2,010 1,640 1,400	574 592 540	730	2,220 2,040 2,590 2,960 2,860	636 609 873 636 548 490	267 273 254 226	122 122 87 73 70 66	275 7,590 3,150 1,640 1,120 820	76 72 76 76
		No	nth			Maximum	Minim	ım	Mean	Per squ mile		n-off in inches
Nov Dec Jan Feb Mar Apr May Jun Jul Aug	ember ember uary ruary ch il y ust					1,090 5,970 3,510 7,400 1,290 1,270 4,470 2,440 756 203 7,590 646	62 280 260 1,060 324 353 618 490 182 61 44		327 1,157 988 2,741 617 617 2,134 1,469 332 112 691 213	1.1	12 14 164 102 102 103 103 105 105 105 105 105 105 105 105 105 105	0.62 2.14 1.89 5.23 1.06 1.18 3.94 2.80 .61 .21 1.31

The year....

.77 .61 1.80

.49

22.14

Lycoming Creek near Trout Run, Pa.

Location. - Chain gage, lat. 41°25'05", long. 77°02'00", at highway bridge half a mile below mouth of Grays Run and 2 3/4 miles above Trout Run, Lycoming County. Zero of gage is 693.4 feet above mean sea level.

Drainage area. - 173 square miles.

Drainage area. - 173 square miles.

Records available. - October 1919 to September 1921, October 1931 to September 1937

In reports of U. S. Geological Survey; December 1913 to September 1937 in reports of Pennsylvania Department of Forests and Waters.

Average discharge. - 20 years (1914-16, 1919-37), 261 second-feet.

Extremes. - Maximum discharge during year, 2,610 second-feet Apr. 6 (gage height, 6.6 feet, from graph based on gage readings), from rating curve extended on basis of slope-area determination; minimum, 11 second-feet Oct. 9 (gage height, 130 feet) 1.39 feet).

1913-37: Maximum discharge, 17,000 second-feet Mar. 18,1936 (gage height,

17.34 feet, from floodmarks, from rating curve extended on basis of slope-area determination; minimum, 3.2 second-feet Sept. 27, 1936 (gage height, 1.28 feet); minimum daily discharge, 4.0 second-feet Sept. 19-24, 27, 28, 1936.

Remarks.- Records poor. Discharge for periods of ice effect, Feb. 5-9, 17, 18, determined from gage heights, weather records, and by comparison with records for stations in adjacent drainage areas. Discharge for days of erroneous gage record, Oct. 2, May 3, June 1, determined by comparison with records for stations mentioned above. Discharge for high stages determined from graphs based on twice-daily gage readings.

Daily and monthly discharge, in second-feet, 1936-37

Day	Oot.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	ug.	Sept.
1	23	88	66	684	307	272	256	684	100	81	27	199
2	20	82	75	571	272	290	272	528	87	72	25	134
3	26	107	94	638	211	272	290	450	102	87	25	109
4	15	779	89	571	205	256	290	383	94	79	21	168
5	14	1,500	79	444	190	510	371	290	85	66	20	142
6	14	684	85	344	180	344	1,820	690	75	59	18	130
7	12	593	91	344	175	307	1,220	485	79	50	26	102
8	12	444	72	383	170	307	779	383	70	44	50	85
9	11	364	81	403	180	290	1,160	383	64	41	44	75
10	26	307	89	464	224	152	1,160	290	68	41	52	68
11	63	239	195	403	147	205	779	272	64	40	379	64
12	39	256	424	364	155	174	571	236	57	52	461	61
13	32	227	290	307	155	174	506	549	54	38	622	59
14	28	208	217	520	236	142	464	528	68	38	272	57
15	23	182	272	1,160	239	137	829	549	120	46	176	56
16	21	176	290	829	199	142	684	383	83	122	134	59
17	292	144	326	684	180	144	731	506	68	81	109	54
18	379	134	272	1,040	150	147	314	423	68	96	104	54
19	162	109	254	829	142	152	444	344	64	74	89	50
05	111	111	1,030	684	142	174	364	307	61	59	79	4'
21	90	118	616	684	177	239	398	290	104	50	75	43
22	72	109	464	1.740	1.740	239	1.260	224	406	44	81	38
23	68	102	344	1,740 1,210 881	1,740 1,100 779	208	1,260 782	217	163	38	96	3!
24	126	96	326	881	779	290	684	217	106	40	83	34
75	129	91	307	1,040	593	344	684	230	87	32	75	31
26	140	94	326	935	464	307	571	160	75	36	98	27
27	152	79 .	364	638	444	256	485	150	64	41	514	28
85	113	70	444	571	326	256	1,050	188	104	32	344	30
29	105	77	383	485		214	704	137	113	28	802	30
30	100	70	364	423		188	684	89	83	32	163	2'
31	96		857	403		233	001	94		32	132	
		Mon	nth		Ma	ximum	Minimu	m	Mean	Per square mile		-off in
Onto	her					379	11		81.1	0.469		0.54
						500	70		255	1.47		1.64
					1	030	66		296	1.71		1.97
						740	307		667	3.86		4.45
						740	142		339	1.96		2.04
						510	137		238	1.38		1.59
						820	256		678	3.92		4.37
						690	89		344	1.99		2.29
						406	54		94.5	.546		.61
					1	122	28		53.9	.312		.36
						622	18		148	.855		.99
						199	27		69.8	.403		.45
-					-							

Loyalsock Creek at Loyalsock, Pa.

Location. - Water-stage recorder, lat. 41°19'25", long. 76°54'40", at highway bridge at Loyalsock, Lycoming County. Zero of gage is 585.63 feet above mean sea level.

Drainage area. - 443 square miles.

Records available. - October 1931 to September 1937 in reports of U.S. Geological Survey; July 1925 to September 1937 in reports of Pennsylvania Department of

Forests and Waters.

Average discharge.-12 years, 698 second-feet.

Extremes.- Maximum discharge during year, 5,930 second-feet Aug. 11 (gage height, 6.94 feet), from rating curve extended above 3,300 second-feet); minimum, 46 second-feet Oct. 9, 10 (gage height, 2.87 feet).

1925-37: Maximum discharge, 34,000 second-feet Nov. 16, 1926 (gage height, 12.3 feet), from rating curve extended above 8,000 second-feet; minimum, 16 second-feet Sept. 18, 19, 22-25, 1932 (gage height, 2.57 feet).

Remarks.- Records good: Discharge for periods of ice effect, Feb. 5-9, 17-19, Feb.

28 to Mar. 1, determined from gage heights, weather records, and by comparison with records for stations in adjacent drainage areas.

Daily and monthly discharge, in second-feet, 1936-37

Day	Oot.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
2 3	61 100 99 78	127 115 115 458	140 134 215 286	1,860 1,300 1,280 1,220	925 740 624 551	700 692 637 619	730 820 884 809	1,460 1,250 1,070 927	291 258 248 285	308 344 325 338	120 110 95 92	548 409 344 302
5	63	3,730	260	914	500	1,140	884	830	258	274	86	310
6 7 8 9 10	57 53 49 46 57	1,910 1,180 882 713 583	232 265 282 280 265	770 713 722 790 839	450 410 400 400 606	984 789 730 730 544	2,590 2,530 1,800 2,420 2,550	1,870 1,720 1,340 1,310 1,150	217 190 172 156 152	227 190 168 149 137	78 92 250 208 322	430 319 258 217 190
11 12 13 14 16	69 96 81 74 65	483 421 371 341 318	510 1,830 1,220 860 731	819 685 608 720 2,100	461 415 408 501 770	520 507 473 416 409	1,880 1,570 1,340 1,210 1,850	996 841 820 1,380 1,650	145 141 126 154 275	149 141 141 133 174	3,860 2,520 2,970 1,480 938	181 172 160 152 160
16 17 18 19 20	61 118 408 358 213	307 281 255 236 209	608 690 755 558 2,210	2,140 1,440 2,420 2,440 1,760	632 450 430 400 408	388 369 369 369 388	1,830 1,470 1,270 1,190 1,050	1,470 1,400 1,300 1,130 996	226 181 164 181 181	787 533 369 350 274	655 512 444 451 356	156 145 141 145 130
21 22 23 24 25	159 127 115 134 209	218 213 204 192 184	2,130 1,340 946 819 740	1,620 3,440 3,140 2,140 3,110	607 4,380 2,620 1,860 1,460	736 1,030 1,040 1,030 1,110	1,060 3,060 3,530 2,420 1,800	862 760 683 619 527	234 1,660 839 477 331	227 186 160 156 168	308 319 375 388 308	126 107 100 98
26 27 28 29 30 31	209 213 196 163 149 138	175 176 138 145 142	685 713 780 760 667 1,280	2,880 1,950 1,410 1,270 1,100 969	1,110 1,040 750	1,360 984 852 730 692 692	1,510 1,680 2,230 2,220 1,760	458 437 574 530 402 338	258 217 257 485 369	152 164 141 126 129 154	302 722 1,250 760 560 444	84 78 84 84 81
		Mon	nth		1	aximum	Minimu	III	Mean	Per squa		-off in
Nov Dec Jan Feb Mar	ember ember uary ruary oh					408 3,730 2,210 3,440 4,380 1,360 3,530 1,870	46 115 134 608 400 369 730 338	1	130 494 748 ,567 868 711 ,732	0.293 1.12 1.69 3.54 1.96 1.60 3.91 2.26		0.34 1.25 1.95 4.03 2.04 1.84 4.36 2.61

1,870

1,660

3,860

787

548

Nay....

June.....

July.....

August....

September.....

The year....

338 125

126

78 78

1,003

304

235

690

193

722

.686

.530

.436

1.56

1.63

Penn Creek at Penns Creek, Pa.

Location. - Water-stage recorder, lat. 40°51'35", long. 77°04'05", at bridge on State Highway 104, three-quarters of a mile northeast of Penns Creek, Snyder County. Zero of gage is 506.74 feet above mean sea level.

Drainage area. - 301 square miles.

Records available. - October 1931 to September 1937 in reports of U. S. Geological Survey; October 1929 to September 1937 in reports of Pennsylvania Department of Forests and Waters.

Extremes. - Maximum discharge during year, 4,000 second-feet Feb. 22 (gage height, 7.05 feet); minimum, 14 second-feet Oct. 6 (gage height, 0.89 foot); minimum daily discharge, 42 second-feet Oct. 6.

1929-37: Maximum discharge, 12,900 second-feet Sept. 16, 1934 (gage height, 13.00 feet); from rating curve extended above 6,000 second-feet; minimum, 7.0 second-feet Sept. 27, 1932; minimum daily discharge, 26 second-feet Nov. 28-30, 1930.

Remarks. - Records excellent except those for period of ice effect, Nov. 29 to Dec. 2 which are fair and were determined from gage heights, weather records, and by comparison with records for stations in adjacent drainage areas. Regulation from power operations upstream.

Daily and monthly discharge, in second-feet, 1936-07

Day	Oot.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	150	88	100	538	928	675	522	1,700	296	133	100	153
2 3	121	89	110	704	769	613	491	1,400	281	127	97	131
	93	99	201	781	654	580	462	1,200	263	137	81	174
4	72	350	192	716	602	630	429	1,020	278	125	71	210
5	61	1,740	174	619	575	877	424	928	257	115	69	198
6	42	929	166	553	522	751	704	1,340	241	112	68	180
7	58	591	317	570	481	681	670	960	226	103	101	149
8	51	462	318	613	472	641	613	823	225	101	108	127
9	55	388	228	597	527	613	928	763	205	89	99	123
10	55	330	235	743	619	522	960	704	205	103	87	102
11	76	288	394	895	452	481	877	624	202	116	138	108
12	67	261	830	793	406	457	817	580	194	107	201	108
13	63	244	591	734	401	438	734	580	180	106	155	103
14	63	228	472	693	452	424	699	1,130	185	110	124	101
15	53	216	415	746	472	415	895	928	191	160	98	94
16	47	210	388	716	415	392	835	823	180	188	82	80
17	295	194	514	608	377	358	728	781	172	133	80	89
18	656	188	486	924	358	371	699	704	179	164	78	97
19	295	165	401	1,090	342	388	670	624	175	133	72	92
20	193	160	1,110	1,020	330	507	619	580	162	118	81	82
21	153	167	1,200	1,020	506	823	647	527	168	99	124	82
22	126	157	658	1,980	3,240	704	1,230	486	228	97	265	76
23	120	145	538	2,500	1,890	670	1,260	467	188	87	214	75
24	118	145	481	2,010	1,440	641	1,160	447	152	85	140	73
25	123	139	462	2,160	1,200	704	1,060	401	136	89	98	66
26	106	135	467	2,040	992	960	1,420	371	132	88	232	69
27	130	119	457	1,660	865	757	3,200	371	123	87	925	69
28	118	108	501	1,400	757	716	3,530	512	129	82	526	81
29	109	103	462	1,260	i	670	2,890	410	139	79	273	80
30	108	98	429	1,090		619	2,140	350	130	100	209	71
31	94		646	1,020		570		322		163	176	
		Mon	th		Max	ziaua	Minimu	. 1	Kean	Per square		off in
Ooto	ber					656	42		125	0.415	0	.48
Nove	mber				i 1.	740	88		285	.947		.06
Dece	mber				1.	200	100		450	1.50		.73
Janu	ary				2.	500	538	1	058	3.51		.05
Febr	uary				. 3,	240	330		752	2.50		.60
Maro	h					960	358		602	2.00		.31
Apri	I				. 3,	530	424	1	,077	3.58		99
May.					. 1.	700	322		737	2.45		82
June						296	123		194	.645		72
July		• • • • • • • • •				188	79		114	.379		44
Augu	st					925	68		167	.555		64
Sept	ember					210	66		108	.359		40
	The ves	r			7	530	42		471	1.56	1	24

Mahantango Creek East near Dalmatia, Pa.

4

Location. - Water-stage recorder, lat. 40°36'40", long. 76°54'45", at highway bridge 2 miles above mouth and 3½ miles south of Dalmatia, Northumberland County. Zero of gage is 400.50 feet above mean sea level.

Drainage area. - 162 square miles.

Records available. - October 1931 to September 1937 in reports of U. S. Geological Survey; October 1929 to September 1937 in reports of Pennsylvania Department of Forests and Waters.

of Forests and Waters.

Extremes. - Maximum discharge during year, 4,730 second-feet Feb. 22 (gage height, 8.49 feet), from rating curve extended above 1,700 second-feet; minimum, 9.5 second-feet Oct. 15 (gage height, 1.11 feet); minimum daily discharge, 14 second-feet Oct. 7, 8, 15, 16.

1929-37: Maximum discharge, 9,850 second-feet Aug. 24, 1933 (gage height, 13.66 feet), from rating curve extended above 3,000 second-feet; minimum, 1.5 second-feet Sept. 21, 1932 (gage height, 0.84 foot).

Remarks. - Records good except those for high stages and for period of ice effect, which are fair. Discharge for period of ice effect, Nov. 26 to Dec. 7, determined from gage height, weather records, and by comparison with records for stations in adjacent drainage areas. Discharge for period of recorder failure, Feb. 8, 9, determined by comparison with records for stations mentioned above. Feb. 8, 9, determined by comparison with records for stations mentioned above. Some regulation at low stages from power operations upstream.

Daily and monthly dischange in second and long and

Day	Oot.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	36	16	25	333	483	355	227	542	171	58	132	161
2	47	17	34	308	382	315	212	444	156	61	75	132
3	29	17	200	348	326	288	195	367	151	54	43	112
4	21	34	140	337	313	274	176	319	176	49	32	102
5	17	242	118	301	291	294	166	291	134	45	28	98
6	15	206	105	264	255	281	468	526	114	47	24	100
7	14	136	350	293	233	261	452	448	106	45	118	85
8	14	106	293	337	220	248	390	386	94	38	155	71
9	16	92	212	308	260	236	390	355	88	34	111	66
10	17	78	302	594	326	209	382	319	108	32	69	58
11	17	64	538	690	239	201	315	277	96	30	101	56
12	28	54	765	600	227	184	288	245	81	28	206	53
13	22	50	524	461	218	176	268	279	74	29	186	52
14	16	48	382	378	248	168	258	470	71	31	130	48
15	14	44	298	478	284	176	284	426	74	53	87	44
16	14	44	242	514	252	171	264	402	68	69	69	41
17	25	38	326	465	233	158	227	394	61	73	58	44
18	58	37	277	650	215	168	209	340	66	58	51	48
19	50	36	242	663	198	168	204	301	126	51	46	41
20	34	32	1,300	604	187	239	187	271	88	40	40	39
21	27	33	985	564	203	454	195	242	110	36	36	36
22	22	32	609	1,030	3,580 1,780	546	356	218	298	33	207	31
23	21	32	422	1,670	1,780	488	386	236	131	29	433	31
24	20	32	337	1,280	1,040	418	352	192	88	33	208	29
25	18	30	284	1,280	790	398	333	168	78	57	146	27
26	22	29	248	1,190	609	431	348	156	68	43	148	24
27	22	28	221	865	501	340	528	158	61	29	1,620	28
28	21	27	209	654	414	326	860	559	66	26	653	25
29	19	26	179	555		298	915	298	69	23	386	28
30	20	26	158	465		268	690	227	61	23	271	28
31	18	-	196	431		248		195		178	206	

Month	Maximum	Minimum	Mean	Per square mile	Run-off in
October	58	14	23.7	0.146	0.17
November	242	16	.56.2	.347	.39
December	1,300	25	339	2.09	2.41
January	1,670	264	604	3.73	4.30
February	3,580	187	511	3.15	3.28
March	546	158	283	1.75	2.02
April	915	166	351	2.17	2.42
May	559	156	324	2.00	2.31
June	298	61	104	.642	.72
July	178	23	46.2	.285	.33
August	1,620	24	196	1.21	1.40
September	161	24	57.9	.357	.40
The year	3,580	14	240	1.48	20:15

Oct.

Frankstown Branch of Juniata River at Williamsburg, Pa.

Location. - Water-stage recorder, lat. 40°27'45", long. 78°12'00", at highway bridge at Williamsburg, Blair County. Zero of gage is 831.78 feet above mean sea level.

Drainage area. - 291 square miles.

Records available. - October 1919 to September 1921, October 1931 to September 1937

in reports of U. S. Geological Survey; October 1916 to September 1937 in reports

of Pennsylvania Department of Forests and Waters.

Jan.

Dec.

Average discharge. - 18 years (1919-37), 394 second-feet.

Extremes. - Maximum discharge during year, 16,600 second-feet Apr. 26 (gage height, 13.90 feet), from rating curve extended on basis of slope-area determination; minimum, 58 second-feet Aug. 20 (gage height, 1.92 feet); minimum daily discharge. 74 second feet Aug. 20 (gage height, 1.92 feet); minimum daily discharge.

charge, 74 second-feet Aug. 4.

1916-37: Maximum discharge, 47,600 second-feet Mar. 18, 1936 (gage height, 18.58 feet, from floodmark in gage shelter), from rating curve extended on basis of slope-area determination; minimum, 13 second-feet July 24, 1934 (gage height, 0.97 foot); minimum daily discharge (estimated), 31 second-feet Dec. 24, 25, 1930.

Maximum stage known, 19.1 feet, from floodmark, June 1, 1889 (discharge, about 35,500 second-feet).

Remarks. - Records good. Regulation at low stages from power operations upstream.

Daily and monthly discharge, in second-feet, 1936-37

July

Aug.

Sept.

Mar.

1	444	149	89	862	847	466	421	1,350	244	122	91	173
2	188	185	100	771	637	457	390	1,090	260	115	81	155
3	130	264	142	1,010	508	490	358	933	234	115	75	158
	111	1,050	145	893	462	556	336	804	244	110	74	187
4 5	88	3,670	135	664	468	824	371	741	204	100	80	326
0	00	0,010	100	004	700							
6	85	1,300	176	544	424	720	753	943	190	104	87	387
7	91	840	727	932	400	678	596	699	186	99	85	232
8	127	657	348	1,120	524	616	568	616	176	94	86	195
9	158	509	288	1,250	783	588	1,030	637	165	91	77	167
10	168	403	263	2,460	699	487	933	556	165	92	135	153
11	158	286	573	2,780	502	446	804	472	178	91	194	162
12	128	286	1,080	1,480	487	404	699	446	157	93	127	180
13	116	283	752	1,070	479	394	616	548	147	91	122	140
14	111	236	583	907	533	371	596	712	147	151	90	127
15	93	236	510	838	494	374	1,160	521	182	384	83	118
16	93	224	455	706	468	336	1,050	449	147	214	77	118
17	2,470	205	583	583	396	318	868	449	141	250	77	118
18	1,360	192	517	1,280	397	364	762	435	242	197	95	113
19	640	164	388	1,170	384	434	658	377	186	149	91	10'
20	411	162	881	967	381	599	552	358	151	129	77	99
21	312	171	749	1,190	490	1,720	660	339	155	118	80	97
22	257	154	603	4,820	1,800	1,090	1,100	321	291	108	376	9"
23	227	145	455	3,680	1,090	933	1,030	327	170	110	317	94
24	219	142	434	2,280	890	783	890	298	143	102	141	94
25	175	138	495	3,040	783	847	1,070	276	134	99	120	96
26	257	135	684	2,190	596	847	10,400	276	129	110	748	91
	267	125	816	1,480	560	699	9,400	387	125	99	1,530	88
27	181	113		1,140	495	637	8,940	432	136	86	600	92
88			1,150	997	490	576	7 640		127	81		91
29	156	128	961				3,640	348			340	90
30 31	156 162	118	816 983	890 847		513 460	1,940	284 254	118	81 81	250 204	90
										Per squa	re Run	-off in
		Mor	ıtn		Me	ximum	Minimu	180	Mean	mile		nohes
Ooto	ber					2,470	85		308	1.06		1.22
Nove	mber					3,670	113		422	1.45		1.62
						1,150	89		545	1.87		2.16
						4,820	544		446	4.97		5.73
						1,800	381		606	2.08		2.17
Marc	h					1,720	318		614	2.11		2.43
					1	.0,400	336		753	6.02		6.72
May.						1,350	254		538	1.85		2.13
						291	118		176	.60	5	.68
						384	81		125	.43		.50
						1,530	74		213	.73		.84
						387	88		145	.49		.56
	The wa	ar			1	0,400	74		573	1.97		26.76

Juniata River at Newport, Pa.

Location. - Water-stage recorder, lat. 40°28'45", long. 77°07'45", at highway bridge at Newport, Perry County, 1,000 feet above mouth of Little Buffalo Creek. Zero of gage is 363.16 feet above mean sea level.

Drainage area. - 3,354 square miles.

Drainage area. - 3,354 square miles.

Records available. - March 1899 to December 1913, October 1918 to September 1921,
October 1923 to September 1926, October 1931 to September 1937 in reports
of U. S. Geological Survey; March 1899 to September 1937 in reports of Pennsylvania Department of Forests and Waters.

Average discharge. - 36 years (1899-1905, 1907-37), 4,466 second-feet.

Extremes. - Maximum discharge during year, 100,000 second-feet Apr. 27 (gage height,
24.44 feet); minimum, 544 second-feet Aug. 4 (gage height, 3.14 feet).

1899-1937: Maximum discharge, 215,000 second-feet Mar. 19, 1936 (gage height, 34.24 feet, from floodmark in gage shelter), from rating curve extended on basis of slope-area determination; minimum (estimated), 260 second-feet Aug.
27. 1925 (gage height. 2.71 feet): minimum daily discharge. 286 second-feet 27, 1925 (gage height, 2.71 feet); minimum daily discharge, 286 second-feet

Sept. 25, 1932.

Maximum stage known, 35.9 feet, from floodmarks, June 1, 1889 (discharge, about 237,000 second-feet).

Remarks. - Records good. Discharge for period of ice effect, Nov. 28 to Dec. 2, determined from gage heights, weather records, and by comparison with records for stations upstream. Slight regulation at low stages from power operations upstream.

Day	Oot.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	845	1,520	1,000	8,350	9,250	6,330	4,950	20,700	2,660	1,130	1,320	2,640
2	1,700	1,420	1,100	8,350	8,650	5,770	4,680	15,200	2,470	1,110	845	2,040
3	2,000	1,400	1,590	8,650	7,340	5,360	4,280	12,000	2,450	1,270	755	1,860
4	1,380	1,970	2,160	8,950	6,330	5,220	4,020	10,200	2,400	1,250	588	2,110
5	980	10,600	2,660	8,950	5,910	5,360	3,760	8,650	2,210	1,090	714	2,780
6	815	16,900	2,560	7,770	5,080	5,630	4,610	10,000	2,160	1,020	714	4,680
7	785	13,000	5,020	7,190	4,540	5,770	5,360	10,600	2,110	980	727	4,280
8	740	8,650	6,530	7,770	4,410	5,630	5,360	8,950	1,680	944	2,090	3,760
8	830	6,900	5,220	8,950	4,820	5,490	5,630	7,770	1,910	926	1,280	3,130
10	875	5,490	4,820	10,500	6,330	5,080	6,760	7,340	1,930	875	1,190	2,400
11	980	4,680	5,360	17,400	7,040	4,680	7,480	6,610	1,570	962	1,370	2,090
12	1,030	3,890	7,040	22,500	6,330	4,410	7,040	6,050	1,660	830	2,880	1,88
13	944	3,380	8,950	16,500	5,630	4,150	6,470	5,630	1,700	815	3,030	2,18
14	890	3,080	8,650	12,000	5,770	4,020	5,910	5,910	1,840	1,210	2,180	1,35
15	785	2,880	7,340	10,200	5,630	4,150	6,050	7,040	1,620	1,590	1,570	1,48
16	815	2,590	5,910	9,250	5,630	3,760	7,040	6,190	1,440	1,580	1,090	1,380
17	1,200	2,520	5,360	8,060	5,220	3,630	7,190	5,770	1,700	3,240	926	1,350
18	6,650	2,280	5,360	8,060	4,820	3,630	6,610	5,080	1,630	3,130	815	1,210
19	10,000	2,090	5,220	10,800	4,680	3,760	6,190	4,820	1,700	2,660	785	1,13
20	6,980	1,980	6,910	11,100	4,540	4,220	5,770	4,540	1,440	1,980	819	1,070
21	4,680	1,700	8,350	10,500	4,510	6,620	5,360	4,280	1,700	1,590	1,170	1,050
22	3,380	1,590	8,060	15,500	16,200	10,100	7,200	4,020	1,720	1,190	1,650	944
23	2,660	1,820	7,190	31,600	21,300	9,550	9,550	3,630	1,790	1,190	3,630	944
24	2,400	1,610	5,910	29,400	16,500	8,060	9,550	3,630	1,950	1,190	4,540	830
25	2,110	1,660	5,360	24,300	12,300	7,480	8,650	3,630	1,660	1,170	2,810	89
26	2,000	1,480	5,080	23,200	9,860	8,350	13,400	3,380	1,440	980	2,650	770
27	1,820	1,420	5,490	18,900	8,350	8,060	79,600	3,300	1,300	962	4,420	72'
28	1,910	1,200	6,050	14,900	7,040	7,190	91,700	3,500	1,170	1,020	7,620	770
29	2,090	1,100	6,900	12,000		6,470	65,700	3,630	1,380	845	5,360	800
30	1,590	1,050	7,190	10,500		5,910	33,500	3,280	1,190	828	4,150	788
31	1,500	1	7,480	9,550		5,360		2,810		1,590	3,180	

Month	Maximum	Minimum	Mean	Per square mile	Run-off in
October	10,000	740	2,173	0.648	0.75
November	16,900	1,050	3,728	1.11	1.24
December	8,950	1,000	5,543	1.65	1.90
January	31,600	7,190	13,300	3.97	4.58
February	21,800	4,410	7,661	2.28	2.37
March	10,100	3,630	5,781	1.72	1.98
April	91,700	3,760	14,650	4.37	4.38
May	20,700	2,810	6,714	2.00	2.31
June	2,660	1,170	1,786	.532	.59
July	3,240	815	1,327	.396	.46
August	7,620	588	2,157	.643	.74
September	4,680	727	1,777	.530	.59
The year	91,700	588	5,532	1.65	22.39

Shaver Creek near Petersburg, Pa.

Location. - Chain gage, lat. 40°36'40", long. 78°00'25", at highway bridge 3 miles northeast of Petersburg, Huntingdon County, and 4 miles above mouth. Zero of gage is 691.38 feet above mean sea level.

Drainage area. - 46.4 square miles.

Records available. - October 1931 to September 1937 in reports of U. S. Geological Survey; October 1929 to September 1937 in reports of Pennsylvania Department

of Forests and Waters.

Extremes. - Maximum discharge during year, 2,100 second-feet Apr. 28 (gage height, 7.51 feet, from floodmark), from rating curve extended above 750 second-feet; minimum, 3.7 second-feet Aug. 3-5 (gage height, 0.62 foot).

1929-37: Maximum discharge, 3,420 second-feet Mar. 18, 1936 (gage height, 9.32 feet, from floodmark), from rating curve extended above 750 second-feet; minimum, 0.9 second-foot Sept. 19, 1932 (gage height, 0.46 foot).

Remarks. - Records poor. Discharge for periods of ice effect, Nov. 27 to Dec. 6, Feb. 4-8, Feb. 26 to Mar. 2, determined from gage heights, weather records, and by comparison with records for stations in adjacent drainage areas.

Discharge for high stages determined from graphs based on twice-daily gage

Discharge for high stages determined from graphs based on twice-daily gage readings. Some regulation at low stages from power operations upstream.

Daily and monthly discharge, in second-feet, 1936-37

ay	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1 2 3 4 5	44 14 9.6 7.6 6.8	15 25 36 329 354	9.0 10 20 17 15	116 98 147 98 77	104 77 77 68 60	68 65 62 77 98	55 52 47 43 51	168 134 109 98 82	26 26 24 23 18	14 8.0 24 13 9.2	5.7 4.3 4.0 3.7 3.7	14 12 12 20 41
6 7 8 9	7.6 7.6 9.2 9.2	115 82 72 56 46	50 122 77 58 47	62 161 147 126 470	50 45 55 104 77	82 72 72 62 62	87 62 55 207 109	161 87 77 72 62	18 16 16 15 15	8.0 7.6 6.4 6.0 6.0	5.4 9.2 15 10 13	24 16 13 12 9.6
11 12 13 14 15	16 10 8.4 8.0 7.6	39 35 33 30 29	142 176 109 72 62	252 161 121 115 115	55 77 58 92 72	62 50 45 47 47	87 77 67 67 239	54 50 166 260 161	15 14 14 16 16	9.6 8.0 6.0 17 66	80 27 16 10 7.6	17 16 10 8.8 6.4
16 17 18 19 20	9.8 295 67 32 22	25 24 22 18 18	54 82 62 64 169	87 84 317 199 154	62 51 49 47 47	44 53 48 82 122	109 82 82 72 62	121 109 92 77 72	12 14 24 15 12	19 29 31 15	7.6 5.7 6.8 7.6 6.0	9.2 7.6 7.6
21 22 23 24 25	19 17 15 20 14	21 18 18 18 14	92 67 67 60 53	168 700 389 389 467	62 301 140 121 104	326 128 104 87 134	134 298 184 134 133	62 60 67 57 47	16 22 12 11 9.6	9.2 7.6 6.8 6.8 6.4	5.4 29 22 12 9.6	5.1 5.1 5.1 4.8
26 27 28 29 30 31	48 25 20 18 17 16	14 13 12 11 10	55 55 72 53 64 216	250 176 140 134 115 109	90 70 55	109 87 77 72 67 60	1,070 1,040 1,360 448 232	44 49 51 41 32 30	8.4 8.0 16 9.2 9.2	10 7.6 5.4 4.8 4.3 6.0	152 170 51 25 19	4.8 4.8 5.7 5.7 5.1
31	1 20	Mo	nth		M	Aximum	Minim	ım	Mean	Per squanile	are R	n-off in inches
Nov Dec Jan Fet Man Apr Man Jun Jun Jun	rember nuary ruary roh ril ref ref ref				1,	295 354 216 700 301 326 360 260 26 66 170 41	6. 10 9. 62 45 44 43 30 8. 4.	0 0 3 7	27.1 51.7 73.3 198 81.1 82.9 225 88.8 15.7 12.5 24.5 10.7	0.584 1.11 1.58 4.27 1.75 1.79 4.85 1.91 .338 .269 .528 .231		0.67 1.24 1.82 4.92 1.82 2.06 5.41 2.20 .38 .31 .61 .26
						360	3.	,7	74.2	1.60		21.70

Standing Stone Creek near Huntingdon, Pa.

Location. Water-stage recorder, lat. 40°31'25", long. 77°58'15", at bridge on State Highway 545, 31 miles northeast of Huntingdon, Huntingdon County, and 31 miles above mouth. Zero of gage is 617.81 feet above mean sea level.

Drainage area. - 128 square miles.

Records available. - October 1931 to September 1937 in reports of U. S. Geological Survey; October 1929 to September 1937 in reports of Pennsylvania Department

of Forests and Waters. Extremes.- Maximum discharge during year, 3,240 second-feet Apr. 28 (gage height, 7.24 feet), from rating curve extended above 1,500 second-feet; minimum gage height, 1.71 feet Dec. 1 (affected by ice, discharge not determined); minimum daily discharge, 16 second-feet Oct. 7.

1929-37: Maximum discharge, 5,500 second-feet (revised) Mar. 18, 1936 gage height, 9.14 feet), from rating curve extended above 1,500 second-feet; minimum, 2.8 second-feet Feb. 11, 1931 (gage height, 0.64 foot); minimum daily discharge, 7.6 second-feet Sept. 12-14, 18-26, 1932.

Maximum stage known, 9.38 feet, from floodmark, June 1, 1889 (discharge, about 5,920 second-feet, revised).

Remarks.- Records good except those for periods of ice effect, Nov. 28 to Dec. 9, Feb. 2-13, Feb. 28 to Mar. 2, Mar. 11, 12, which are fair and were determined

Feb. 2-13, Feb. 28 to Mar. 2, Mar. 11, 12, which are fair and were determined from gage heights, weather records, and by comparison with records for stations in adjacent drainage areas. Some regulation at low stages from power operations upstream.

Day	Oot.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	167	37	19	410	382	170	153	585	71	37	27	33
2	70	44	25	314	300	170	144	461	68	35	26	30
3	. 31	86	40	391	250	183	129	382	64	46	24	29
5	24 21	638	50 45	344 248	210 130	216 280	120	325 300	64 60	40 33	24	49 161
6	18	467	100	210	160	245	188	596	57	32	28	85
7	16	291	400	304	140	223	180	373	55	31	30	51
8	28 33	217	220	374	140	203	147	308 276	52	30	66	40
10	44	170 141	170	326 671	210	189	266 276	242	50 50	29 29	36 36	33 30
11	50	115	313	775	170	140	223	209	52	35	316	35
12	37	101	560	482	150	135	199	186	49	34	109	41
13	29 25	94	356	365 314	150 190	134	180 174	186 478	45 45	33 34	60 45	31 27
14	20	86 81	236	301	206	129	382	351	51	72	33	26
16	22	70	148	256	177	124	325	280	46	64	30	24
17	833	66	213	213	160	124	245	249	43	62	28	26
18	384 142	60	192	578 558	136 129	129 142	203	216	52 52	96 48	27	26 24
20	79	50 50	145 358	422	126	207	183	167	45	35	26	24
21	57	52	309	414	183	562	221	153	45	33	55	22
22	48	50	221	1,420	1,230	355	462	139	64	30	253	21
23	43 48	46	188	1,420 1,350 890	386	264	470 355	139	49 39	28 33	140	20
24 25	40	40	145	1,060	325	286	321	113	36	46	39	20
26	68	40	138	850	268	364	1,230	104	34	35	191	20
27	90	31	145	590	227	268	2,640	108	34	32	207	19
28	58 57	27	181	470 418	190	234	2,740	122	44 40	28 26	85 52	19
30	48	24 21	157	373		183	780	85	35	25	41	21
31	42	21	373	377		167		76	-	26	35	~0
		Mon	ith		Ma	ximum	Minimum		lean	Per square mile		off in
						833	16 21		86.2	0.673		.78
						1,640 560	19		196	1.27 1.53		.76
						1,420	210		518	4.05		.67
						1,230	126		255	1.99		.07
						562	124		212	1.66		.91
Apri						2,740	117		489	3.82	4	. 26

Maximum	Minimum	Mean	Per square mile	Run-off in
833	16	86.2	0.673	0.78
1.640	21	163	1.27	1.42
560	19	196	1.53	1.76
1.420	210	518	4.05	4.67
	126	255		2.07
		212		1.91
	117		3.82	4.26
	76		1.92	2.21
71				.43
				.35
		The second secon		.63
				.30
201		01,0	1001	••••
2,740	16	196	1.53	20.79
	833 1,640 560 1,420 1,230 562 2,740 596 71 96 316 161	833 16 1,640 21 560 19 1,420 210 1,230 126 562 124 2,740 117 596 76 71 34 96 25 316 24 161 19	833 16 86.2 1,640 21 163 560 19 196 1,420 210 518 1,230 126 255 562 124 212 2,740 117 489 596 76 246 71 34 49.7 96 25 38.6 316 24 70.1 161 19 34.2	833 16 86.2 0.673 1,640 21 163 1.27 560 19 196 1.53 1,420 210 518 4.05 1,230 126 255 1.99 562 124 212 1.66 2,740 117 489 3.82 596 76 246 1.92 71 34 49.7 .388 96 25 38.6 .302 316 24 70.1 .548 161 19 34.2 .267

SUSQUEHANNA RIVER BASIN

Location. - Water-stage recorder, lat. 40°12'55", long. 78°15'55", at highway bridge half a mile west of Saxton, Bedford County. Zero of gage is 794.73 feet above

Raystown Branch of Juniata River at Saxton, Pa.

mean sea level. Drainage area. - 756 square miles.

Records available. - October 1918 to September 1921, October 1931 to September 1937 in reports of U. S. Geological Survey; August 1911 to September 1937 in reports of Pennsylvania Department of Forests and Waters. Records prior to October 1931 obtained at a site 0.8 mile downstream.

obtained at a site 0.8 mile downstream.

Average discharge. - 26 years, 948 second-feet.

Extremes. - Maximum discharge during year, 31,300 second-feet Apr. 27 (gage height, 16.15 feet), from rating curve extended on basis of slope-area determination; minimum, 112 second-feet Aug. 20 (gage height, 1.17 feet).

1911-37: Maximum discharge, 80,500 second-feet Mar. 18, 1936 (gage height, 24.54 feet, from floodmark in gage shelter), from rating curve extended on basis of slope-area determination; minimum, 52 second-feet Oct. 17, 18, 1930.

Maximum flood known prior to 1911, 23.0 feet, from floodmark at present site, June 1, 1889 (discharge, about 71,300 second-feet).

Remarks. - Records good except those for periods of recorder failure, Oct. 28 to Nov. 2, Nov. 14-18, Nov. 22 to Dec. 1, Dec. 7-15, Dec. 20 to Jan. 5, which are poor and were determined from range lines on chart and by comparison with records for stations in adjacent drainage areas. Discharge for period of ice effect, Feb. 5, 6, determined from gage heights, weather records, and by comparison with Feb. 5, 6, determined from gage heights, weather records, and by comparison with records for stations mentioned above.

Daily and monthly discharge, in second-feet, 1936-37

Day	Oot.	No▼.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	179	240	170	2,400	1,870	1,170	869	3,580	379	229	149	306
2	175	250	266	2,500	1,610	1,070	797	2,630	371	210	142	260
3	249	260	338	3,000	1,220	1,070	758	2,150	344	200	139	229
4	205	803	371	2,400	1,100	1,110	689	1,760	344	200	142	294
5	175	6,420	371	2,000	1,000	1,250	642	1,560	325	196	142	1,030
6	152	4,000	924	1,650	950	1,460	842	1,870	325	187	136	1,400
7	146	2,150	2,000	1,650	900	1,410	1,230	1,820	306	183	136	1,080
8	149	1,530	1,400	2,990	920	1,320	994	1,450	282	175	156	709
9	149	1,250	1,000	2,870	1,480	1,240	1,190	1,420	266	168	134	526
10	156	1,020	800	4,190	2,040	1,130	1,700	1,300	276	160	161	415
11	172	807	1,300	9,980	1,620	984	1,480	1,120	357	238	187	364
12	172	661	2,800	5,580	1,390	910	1,410	1,020	293	257	164	344
13	168	579	2,000	3,380	1,340	838	1,250	952	276	216	187	344
14	156	550	1,600	2,510	1,260	818	1,130	1,100	248	212	168	293
16	149	520	1,300	2,150	1,280	807	1,310	1,120	244	1,610	149	244
16	136	490	1,180	1,870	1,130	758	1,650	920	238	1,230	139	224
17	2,040	450	1,160	1,510	1,060	709	1,540	858	249	570	130	219
18	5,400	390	1,110	1,760	889	718	1,360	869	249	420	123	214
19	1,940	344	1,180	2,570	848	858	1,230	848	238	338	123	200
20	1,160	338	2,400	2,270	848	1,240	1,080	728	238	293	117	196
21	807	319	2,000	2,570	889	2,180	973	670	244	276	152	183
22	615	330	1,600	6,310	4,670	2,870	1,240	624	293	233	313	175
23	501	320	1,400	9,780	4,290	2,210	1,920	642	379	219	391	172
24	445	300	1,300	6,470	3,000	1,820	1,630	633	312	205	307	164
25	400	320	1,200	5,580	2,390	1,650	1,680	561	249	196	229	160
26	371	300	1,400	5,410	1,820	1,760	17,700	536	219	168	395	156
27	344	290	1,700	3, 860	1,500	1,500	25,700	492	210	175	1,630	152
28	340	280	2,200	2,750	1,530	1,340	17,800	493	244	164	1,470	149
29	320	220	2,100	2,210		1,220	10,200	544	229	160	810	142
30	290	190	2,000	1,980		1,080	5,430	493	260	149	509	142
31	260		2,200	1,650		962		429		149	371	
		Mor	ith		M	aximum	Minimu	ım i	Mean	Per squa		n-off in nohes
Ooto	ber					5,400	136		578	0.765		0.88
						6,420	190		864	1.14		1.27
Dece	ember					2,800	170	1	,380	1.83		2.11
						9,980	1,510		,477	4.60		5.30
						4,670	848		,594	2.11		2.20
						2,870	709		,273	1.68		1.94
						5,700	642		,581	4.74		5.29
_						3,580	429	1	,135	1.50		1.73
					1	379	210		283	.374		.42
		• • • • • • • •				1,610	149		303	.401		.46
						1,630	117		306	.405		.47
Sepi	tember					1,400	142		350	.463		.52
	Mh a are				2	5,700	117	7	,258	1.66		22.59

Dunning Creek at Yount, Pa.

Location. - Chain gage, lat. 40°03'30", long. 78°28'30", at highway bridge at Yount, Bedford County, 3 miles above mouth and 3½ miles northeast of Bedford. Zero of gage is 1,046.43 feet above mean sea level.

Drainage area. - 191 square miles.

The year.....

Records available. - October 1931 to September 1937 in reports of U. S. Geological Survey; November 1929 to September 1937 in reports of Pennsylvania Department of Forests and Waters.

Extremes. - Maximum discharge during year, 11,000 second-feet Apr. 26 (gage height, 13.38 feet, from floodmark), from rating curve extended above 1,700 second-feet; minimum, 16 second-feet Aug. 16 (gage height, 0.53 foot); minimum daily dis-

charge, 18 second-feet Aug. 16, 17, 20.

1929-37: Maximum discharge (estimated), 17,900 second-feet Mar. 18, 1936
(gage height, 18.08 feet, from floodmark affected by backwater from Raystown Branch of Juniata River); minimum, 4.9 second-feet July 28, 1930 (gage height, 0.46 foot).

Remarks. - Records fair. Discharge for periods of ice effect, Nov. 27 to Dec. 4, Feb. 4-8, determined from gage heights, weather records, and by comparison with records for stations in adjacent drainage areas. Discharge for high stages determined from graphs based on twice-daily gage readings. Slight regulation at low stages from power operations upstream.

Day	Oot.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	114	74	50	585	570	212	201	655	74	32	30	68
2	64	82	60	620	260	212	179	515	73	30	25	55
3	46 59	123 874	70 78	770 550	212 180	256 260	168	400	68	33 32	23 24	50
5	34	2,660	87	415	170	445	152 168	326 286	78 64	30	22	201 351
6	32	930	139	326	160	415	326	400	60	27	23	312
7	31	585	604	855 870	160 299	385	273	260	54	26	21	201
8	53 59	415 312	299 2 4 8	1,060	515	340 312	286 550	260 260	50 49	25 24	23 22	152
10	41	248	224	2,250	415	248	445	201	49	23	26	91
11	42	190	561	2,540	299	224	400	190	53	21	94	91
12	59	168	810	1,180	273	201	340	168	46	26	33	96
13	33 30	154 140	585 415	730 550	273 312	190 179	286 299	190	45	26 87	26	68
14 16	30	132	355	480	273	168	585	273	41 57	1,010	22 20	58 50
16	36	123	286	370	260	158	585	179	45	168	18	46
17	1,720	110	355	326	201	140	515	190	42	117	18	48
18	930	103	299	762	201	190	400	212	57	132	19	43
20	415 273	89 87	608	690 655	201	273 410	326 260	158 150	51 42	87 73	20	37
21	201	87	415	920	224	1,000	273	148	39	64	29	33
22	152	84	340	3,260	1,110	810	515	140	98	53	48	31
25 24	130 134	78 76	299	3,140	810 620	585 445	415	179 132	57 45	54 45	65 37	29
25	103	73	340	1,780	480	515	400	115	42	41	26	27
26	105	71	415	1,500	340	515	6,340	106	40	37	355	26
27	117	66	515	890	286	415	5,470	112	39	34	655	25
28	89 84	62 59	770 690	585 515	212	355 299	2,000	156 106	39 39	30 29	312 168	26
30	87 81	55	550 730	415		260 224	975	91	32	26 26	117	24
31		Mon	a de la composition della comp		Ma	xisus	Minisu		fean	Per square	Run-	off in
Ooto	ber				1	,720	30		171	0.895	1	.03
Nove	mber				2	,660	55		277	1.45	1	.62
Dece	mber					810	50		379	1.98		.28
Jant	ary	• • • • • • •			3	,260 ,110	526 160		016 333	5.32 1.74		.15
						,000	140		343	1.80		.08
						340	152		935	4.90		.47
May.						655	79		221	1.16	1	.34
						98	32		52.3	.274		.31
Ten I a	7				1	.010	21		79.6	.417		.48
						REE	10		70 4	410		477
Augu	18t					655 351	18 24		78.3 81.2	.410 .425		.47

Brush Creek at Gapsville, Pa.

SUSQUEHANNA RIVER BASIN

Location. - Water-stage recorder, lat. 39°57'20", long. 78°15'15", at highway bridge three-quarters of a mile northwest of Gapsville, Bedford County, and 5½ miles above confluence with Shaffer Creek. Zero of gage is 1,122.39 feet above mean

sea level.

Drainage area. - 36.8 square miles.

Records available. - October 1931 to September 1937 in reports of U. S. Geological Survey; November 1929 to September 1937 in reports of Pennsylvania Department of Forests and Waters.

Extremes. - Maximum discharge during year, 2,810 second-feet Apr. 26 (gage height, 7.03 feet); minimum, 0.8 second-foot Oct. 14.
1929-37: Maximum discharge, 6,870 second-feet (revised) Mar. 17, 1936 (gage height, 9.81 feet), from rating curve extended above 2,600 second-feet; minimum, 0.2 second-foot Aug. 28, Sept. 12, 20-23, 1932.

Remarks. - Records fair. Regulation at low stages from power operations upstream.

Daily and monthly discharge, in second-feet, 1936-37

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5.8	2.8	2.5	120	92	79	41	199	11	7.4	3.9	4.5
2	2.4	3.6	4.8	120	73	71	39	146	11	6.1	3.9	3.0
3	2.1	4.4	15	168	70	68	36	116	10	5.9	3.9 3.1	3.0
4	1.7	29	13	136	51	71	33	94	11	6.1 5.9 6.0	3.7	34
5	1.4	130	9.7	114	49	80	38	88	9.4	5.4	12	94
6	1.5	54	17	92	44	79	72	132	8.5	5.4	3.4	67
7	2.4	35	72	107	39	79	63	101	8.2	4.4	3.3	32
8	2.0	27	37	110	49	76	67	100	7.6	4.5	3.0	18
9	2.8	22	28	106	86	74	91	93	50	4.1	4.3	12
10	2.4	16	29	288	94	63	88	84	42	3.6	3.1	8.0
11	1.6	13	94	540	85	57	87	72	19	8.2	6.8	9.3
12	2.5	11	123	236	82	50	81	61	13	8.4	4.5	8.4
13	3.3	10	87	169	76	46	74	60	11	5.0	3.4	8.4 5.7 4.3
14	.8	9.3	68	132	74	43	70	60	9.8	9.2	3.4	4.3
15	2.0	8.8	56	126	66	43	79	49	11	145	1.7	3.9
16	2.6	7.5	49	99	59	40	65	41	8.7	30	3.2	3.6 2.8
17	271	6.6	63	88	49	40	54	39	8.1	19	1.2	2.8
18	57	6.1	47	121	42	41	50	34	11	17	1.2	3.4 2.8 2.9
19	19	5.4	43	130	39	44	51	29	8.7	13	1.4	2.8
20	11	5.2	143	126	38	61	46	27	8.2	11	1.6	2.9
21	8.1	5.6	104	157	97	88	54	24	21	10	3.3	2.6
22	6.3	5.0	80	304	558	85	94	24	32	8.5	14	2.2
23	6.6	4.5	61	396	282	86	96	25	9.0	7.2	8.1	1.8
24	5.8	4.4	51	300	208	80	97	22	9.0	6.6	4.3	1.9
26	4.2	4.2	46	279	162	86	156	19	7.4	6.6	5.4	1.8
26	5.2	4.0	52	229	128	76	2,040	18	6.6	5.6	89	1.5
27	4.9	4.0	77	176	106	63	1,200	19	7.3	5.3	124	1.8
28	4.1	3.6	111	140	91	57	1,220	19	8.5	4.8	30	1.8 2.1 2.4 1.8
29	3.3	3.8	91	120		52	475	17	8.2	4.3	12	2.4
30	3.2	3.1	81	100		47	286	14	7.9	3.9	7.5	1.8
31	3.2		121	97		44		12		5.9	5.7	

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inohes
October	271	0.8	14.5	0.394	0.45
November	130	2.8	15.0	.408	.46
December	143	2.5	60.5	1.64	1.89
January	396	88	169	4.59	5.29
February	558	38	103	2.80	2.92
March	88	40	63.5	1.73	1.99
April	2,040	33	231	6.28	7.01
May	199	12	59.3	1.61	1.86
June	42	6.6	12.2	.332	.37
July	145	3.6	12.4	.337	.39
August	124	1.2	12.1	.329	.38
September	94	1.5	11.4	.310	.35
The year	2,040	.8	63.3	1.72	23.36

Great Trough Creek near Marklesburg, Pa.

Location. - Water-stage recorder and concrete control lat. 40°21'00", long. 78°07'50", at highway bridge half a mile above mouth and 3 miles southeast of Marklesburg, Huntingdon County. Zero of gage is 714.48 feet above mean sea level.

Drainage area. - 84.6 square miles.

Records available. - October 1931 to September 1937 in reports of U. S. Geological Survey; January 1930 to September 1937 in reports of Pennsylvania Department of Forests and Waters.

Extremes. - Maximum discharge during year, 4,260 second-feet Apr. 26 (gage height, 6.10 feet, from floodmark), from rating curve extended above 600 second-feet; minimum, 4.1 second-feet Aug. 20 (gage height, 0.60 foot).

1930-37: Maximum discharge, 9,580 second-feet Mar. 17, 1936 (gage height, 8.46 feet), from rating curve extended above 600 second-feet; minimum, 0.6 second-foot Sept. 22, 23, 1932, Sept. 3, 1934.

Remarks. - Records fair except those for extremely high stages, which are poor. Discharge for periods of ice effect, Nov. 27 to Dec. 11, Dec. 23, 24, Feb. 4-6, 11, 12, determined from gage heights, weather records, and by comparison with records for stations in adjacent drainage areas. Discharge for period of recorder failure, Apr. 25-30, determined from range lines on recorder chart and by comparison with records for stations mentioned above. Some regulation and by comparison with records for stations mentioned above. Some regulation at low stages from power operations upstream.

Day	Oot.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	14	13	13	187	210	128	101	420	43	13	7.9	15
2	15	14	12	159	153	114	96	322	38	12	6.9	12
3	9.4	17	20	250	131	109	85	259	37	12	6.2	10
4	7.0	156	50	221	110	117	76	214	40	12	6.2 5.4	20
5	5.8	568	31	170	98	140	86	194	35	12	6.1	153
6	5.3	269	33	137	92	131	179	323	32	12	6.9	123
7	5.1	140	150	186	87	120	140	254	31	11	7.0	65
8	6.1	101	130	237	85	109	123	217	28	10	6.4	44
9	7.6	83	100	217	120	109	222	210	27	9.4	11	34
10	9.6	67	80	435	162	92	198	180	27	9.2	13	27
11	11	52	160	611	110	85	173	159	26	13	9.8	25
12	11	48	267	425	110	78	150	140	24	28	8.8	31
13	8.7	43	173	304	106	74	134	134	20	17	0 5	23
14	6.1	40	125	246	114	72	128	147	22	16	11	16
16	5.8	38	106	225	114	72	206	125	25	29	7.7	14
16	6.8	35	92	190	106	68	176	109	22	61	6.2	13
17	317	33	106	153	94	65	150	101	19	36	5.0	13
18	223	32	94	233	90	74	137	99	20	45	4.7	14
19	75	28	78	267	83	85	125	90	20	27	4.7	12
20	45	24	206	217	87	119	114	80	18	21	4.7	10
21	35	25	185	261	114	242	130	74	20	16	11	9.8
22	28	24	137	689	879	198	208	68	40	14	40	8.8
23	26	21	100	781	500	170	166	74	28	16	98	8.3
24	24	21	110	594	341	153	153	72	17	22	32	7.0
25	21	20	124	605	259	203	380	63	16	22 13	20	7.0
26	20	19	156	499	198	263	3,100	58	14	12	39	7.0
27	19	16	170	365	162	202	1,800	61	14	10	124	6.7
28	18	17	202	267	144	170	2,200	68	15	9.2	58	7.0
29	14	15	162	225		150	1,100	65	14	8.1	33	7.7
30	14	14	140	194		128	600	54	14	7.9	25	8.1
31	14		172	196		114		47		7.4	17	

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
Ootober	317	5.1	33.1	0.391	0.45
November	568	13	66.4	.785	.88
December	267	12	119	1.41	1.63
January	781	137	314	3.71	4.28
February	879	83	174	2.06	2.14
March	263	65	128	1.51	1.74
April	3,100	76	421	4.98	5.56
May	420	47	145	1.71	1.97
June	43	14	24.9	.294	.33
July	61	7.4	17.5	.207	.24
August	124	4.4	20.7	.245	.28
September	153	6.7	25.0	.296	.33
The year	3,100	4.4	123	1.45	19.83

Aughwick Creek near Orbisonia, Pa.

Location. - Chain gage, lat. 40°12'35", long. 77°55'30", at highway bridge 600 feet above East Broad Top Railroad bridge, 650 feet above mouth of Three Springs is 619.04 feet above mean sea level. Drainage area. - 174 square miles.

Records available. - October 1931 to September 1937 in reports of U. S. Geological Survey; May 1915 to February 1916, January 1930 to September 1937 in reports of Pennsylvania Department of Forests and Waters.

Extremes. - Maximum discharge during year, 10,700 second-feet Apr. 26 (gage height, 14.45 feet, from floodmark); minimum, 9.6 second-feet Aug. 19, 20 (gage height,

1.52 feet).

1915-16, 1930-37: Maximum discharge, 18,900 second-feet (revised) Mar. 18, 1936 (gage height, 19.16 feet, from floodmark), from rating curve extended above Maximum stage known, 20.5 feet, from floodmark, June 1, 1889 (discharge, about 21,500 second-feet, revised).

Remarks.- Records fair. Discharge for period of ice effect, Nov. 28 to Dec. 5, for stations in adjacent drainage areas. Discharge for high stages determined from graphs based on twice-daily gage readings. Some regulation at low stages from graphs based on twice-daily gage readings. Some regulation at low stages from operation of gristmills upstream.

Daily and monthly discharge, in second-feet, 1936-37

Day	Oot.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Ama	
1	19	30	25	371	437	260	131		-	_	Aug.	Sept
2	38	30	27	356	327	248	125	800	59		16	3
3	26	38	100	590	273	235	114	590	54	1	16	3
4	19	269	140	511	260			473	54	30	14	2
5	15	1,340	100	371	248	211	104	387	56	26	16	3
6	10	4800		0,2	₽ .3 0	211	107	341	54	27	19	3 2 3 14
7	12 13	472 260	137	300	223	200	241	822	49	00		
8	12	188	726	478	235	188	223	530	44		20	25
9	15		402	590	223	177	200	455	42		21	12
10	19	156 118	313	511	341	177	342	420	100		29	8
		110	211	1,030	420	145	371	341	86	22 20	25	8
11	17	90	358	1,530	300	242	327			20	20	4
12	18	79	710	935	313	141		286	82	20	59	42
13	17	72	455	630	273	125	286	248	61	20	48	49
14	16	68	313	473	273	127	235	235	53	32	30	38
15	15	63	248	473	248	125	223	313	44	30	22	35
16	21				220	125	313	248	48	148	18	28
17	770	58 50	200	371	223	118	273	200	44	243	3.	
18	468	47	200	300	177	114	223	188	37	101	14	26
19	164	39	180	590	166	129	211	177	41	127	13	28
20	94	39		630	177	166	200	156	47		13	25
		00	636	530	177	248	177	156	39	86 57	9.6	25 22
22	69 52	41	511	630	293	454	191	127			1	42
23	45	41	356	1,470	3.810	371	492	118	35	52	25	20
24		37	223	1,850	3,810	313	473		104	45	102	20 18
25	42	38	260	1,230	890	273	387	129	84	39	197	18
0	38	36	260	1,180	670	300	385	105	50 35	37	59	16
85	33	36	300	935	400				30	34	42	14
27	38	29	313	670	492	260	6,680	91	30	28	82	3.0
85	33	29	387	511	387	211	6,270	94	29	26	365	15
9	29	31	327	437	313	188	5,570	102	30	23	184	13
30	33	26	300	387		177	2,160	91	44	20	88	13
1	32		341	371		156	1,180	76	37	20	58	17
				0/1		143		68		16	48	20
		Month				imum	Minimum	M	lean	Per square		ff in
Ovemb	er	• • • • • • • • • •	• • • • • • • • •			770	12		72.0		100	hes
						340	26		128	0.414 .736	0.4	
						726	25		301		.8	
						350	300	1	685	1.73	1.9	
							166		486	3.94	4.5	
						154	114		204	2.79	2.90	
							104		940	1.17	1.38	
						322	68		273	5.40	6.02	
						.04	29		52.4	1.57	1.81	1
						43	16		47.5	.301	.34	
ptem	ber			• • • • • • • • • • • • • • • • • • • •	3	65	9.6			.273	.31	
						53	13		54.3 43.9	.312	.36	
	he veen								10.5	.252	.28	
T	TO JOAT				6,6	90	9.6		272			

Tuscarora Creek near Port Royal, Pa.

Location. - Water-stage recorder, lat. 40°30'55", long. 77°25'10", at highway bridge 2 miles southwest of Port Royal, Juniata County. Zero of gage is 419.80 feet above mean sea level.

Drainage area. - 214 square miles. Records available. - October 1918 to September 1921, October 1931 to September 1937 in reports of U. S. Geological Survey; August 1911 to September 1937 in reports of Pennsylvania Department of Forests and Waters.

Average discharge. - 26 years, 265 second-feet. Extremes. - Maximum discharge during year, 12,200 second-feet Apr. 27 (gage height, 15.68 feet), from rating curve extended above 5,000 second-feet; minimum, 3.9 second-feet Oct. 16 (gage height, 2.22 feet); minimum daily discharge, 6.5 second-feet Oct. 16.

1911-37: Maximum discharge (estimated), 14,400 second-feet 'lar. 18, 1936; maximum gage height, 21.60 feet, from floodmark affected by backwater from Juniata River, Mar. 19, 1936; minimum discharge, 1 second-foot Aug. 31, Sept. 4-6, 14, 18, 1913, Sept. 21, 1914.

Maximum flood known prior to 1911, 20.5 feet June 1, 1889 (affected by

backwater, discharge not determined).

Remarks.- Records good. Discharge for days of recorder failure, Apr. 29, July 20, 25, Sept. 7, determined from range lines on recorder chart and by comparison with records for stations in editerent descriptions. with records for stations in adjacent drainage areas. Regulation at medium and low stages from operation of gristmills upstream.

Day	Oot.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	40	30	49	476	562	336	222	955	96	44	54	82
2	55	43	49	410	427	315	209	730	90	42	40	69
3	40	55	153	610	322	294	194	586	84	45	26	71
4	24	306	218	518	293	273	176	486	86	32	22	71
5	18	2,030	147	413	309	267	187	447	87	44	45	163
6	17	613	294	343	252	247	376	955	77	33	48	194
7	16	338	1,300	405	278	227	309	606	76	38	85	130
8	22	241	534	562	276	211	261	483	67	31	321	93
9	29	194	332	472	381	204	360	430	65	31	99	76
10	30	158	300	729	488	178	402	371	67	52	54	63
11	40	128	522	1,440	318	174	343	318	71	54	134	55
12	33	110	855	839	292	162	312	285	65	42	147	57
13	27	103	576	594	294	162	285	270	56	32	182	60
14	21	94	402	483	312	136	273	590	64	42	91	46
15	19	88	309	510	312	167	380	444	64	138	50	41
16	6.5	86	258	458	279	162	363	343	79	99	47	35
17	248	73	294	368	241	151	288	306	62	88	15	39
18	533	68	261	585	235	176	270	264	66	67	29	43
19	202	62	206	690	227	206	261	233	71	101	31	35
20	122	58	738	586	233	282	233	206	58	70	247	39
21	88	58	633	582	469	600	277	188	63	46	101	29
22	69	54	434	1,730	4,340	480	803	174	87	40	277	29
25	61	56	314	2,000	1,570	385	721	171	119	36	700	26
24	59	53	268	1,300	944	326	546	164	64	33	191	25
25	60	51	289	1,240	690	375	476	142	51	50	117	24
26	61	49	336	1,000	522	501	3,630 9,110 7,040	132	46	66	359	15
27	56	43	364	730	448	364	9,110	134	35	38	662	24
28	55	42	420	582	371	340	7,040	164	51	29	292	24
29	44	48	371	522		306	2,440	138	49	23	175	29
30	40	38	318	483		270.	1,380	119	46	24	124	30
31	39		412	466		244		106		37	99	

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
Ootober	533	6.5	70.1	0.328	0.38
November	2,030	30	179	.856	.93
December	1,300	49	386	1.80	2.08
January	2,000	343	714	3.34	3.85
February	4,340	227	560	2.62	2.73
March	600	136	275	1.29	1.49
April	9,110	176	1,071	5.00	5.58
May	955	106	353	1.65	1.90
June	119	35	68.7	.321	.36
July	138	23	49.9	.233	.27
	700	15	157	.734	.85
August September	194	15	57.2	.267	.30
The year	9,110	6.5	326	1.52	20.72

22.57

Cocolamus Creek near Millerstown, Pa.

Location. - Water-stage recorder and concrete control, lat. 40°33'55", long. 77°07'05" at highway bridge 2.3 miles northeast of Millerstown, Perry County, and 3 miles above mouth. Zero of gage is 425.50 feet above mean sea level.

Drainage area. - 57.2 square miles.

Records available. - October 1931 to September 1937 in reports of U. S. Geological Survey; February 1930 to September 1937 in reports of Pennsylvania Department of Forests and Waters.

of Forests and Waters.

Extremes. - Maximum discharge during year, 1,590 second-feet Feb. 22 (gage height, 5.43 feet); minimum recorded, 3.7 second-feet Sept. 28 (gage height, 1.08 feet). 1930-37: Maximum discharge, 4,560 second-feet (revised) Aug. 24, 1933 (gage height, 8.20 feet); minimum, 0.7 second-foot Aug. 15, 1932 (gage height, 0.81 foot); minimum daily discharge, 1.3 second-feet Aug. 28, 1932.

Remarks. - Records fair except those for period of plugged intake, 0ct. 1 to Jan. 6, which were determined from once-daily gage readings and are poor. Discharge for days of missing gage record, 0ct. 8, 25, Nov. 3, 4, determined by comparison with records for stations in adjacent drainage areas. Some regulation at low stages from operation of gristmill upstream. stages from operation of gristmill upstream.

Daily and monthly discharge, in second-feet, 1936-37

Day	Oot.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1 2 3 4 5	9.4 7.4 6.0 5.0	7.8 9.6 11 45 211	8.8 12 65 52 50	128 121 158 123 109	126 102 94 91 78	90 82 73 71 76	67 61 57 52 53	179 146 121 104 95	26 24 42 43 24	13 9.3 9.4 9.0 7.7	26 16 11 9.9 7.8	21 18 26 75 32
6 7 8 9 10	4.8 4.6 5.0 6.5 8.3	121 86 69 59 52	69 86 116 91 166	86 117 128 123 218	81 71 63 129 142	69 65 59 59	117 88 82 130 128	290 163 156 150 126	22 20 17 14 20	9.8 7.0 6.2 6.8 7.0	6.9 9.2 18 12 9.8	27 20 16 15
11 12 13 14 15	9.4 8.1 7.8 4.6 4.2	32 44 36 32 26	394 214 153 138 119	282 198 138 121 128	103 100 86 104 95	48 43 46 46 46	116 100 86 82 124	102 91 88 123 121	17 14 13 13	5.8 4.4 6.1 11 62	52 124 91 30 20	11 14 10 9.9
16 17 18 19 20	104 57 26 18	14 13 12 9.6	109 111 100 140 414	104 95 184 203 181	88 78 71 65 63	44 40 52 58 95	98 86 84 78 69	114 116 93 84 73	14 13 21 21 15	22 15 17 11 9.2	15 13 12 10 23	7.8 15 12 9.1 8.1
21 22 23 24 25	12 10 13 12	11 20 12 11	168 128 95 100 88	181 578 692 414 414	139 916 346 238 189	263 184 138 114 138	88 344 276 195 156	65 61 57 54 46	18 92 20 15 11	7.6 6.8 5.8 5.8	12 26 33 16 14	8.6 8.3 8.0 7.6 6.8
26 27 28 29 30 31	11 14 12 8.3 8.6 8.8	9.9 10 11 9.9	82 78 121 116 109 189	368 248 176 156 133 131	138 119 103	141 116 109 93 80 73	492 710 548 385 248	41 41 59 41 34 32	11 10 13 10	15 8.6 7.6 5.8 6.2 186	128 166 72 42 32 28	5.2 4.6 7.0 8.6 7.8
		Mont	h		Ma	ximum	Minimus	1	iean	Per square		off in
Novem Decem Janua Febru March April May June July Augus	aberaberaberarya					121 211 414 692 916 263 710 290 92 186 166 75	4.6 7.8 8.6 86 63 40 52 32 10 4.6	8 8	17.5 34.0 125 208 144 85.8 173 98.9 20.8 17.7 35.0 14.7	0.306 .594 2.19 3.64 2.52 1.50 3.02 1.73 .364 .309 .612 .257	2 4 2 1 3 1	.35 .66 .52 .20 .62 .73 .37 .99 .41 .36
	The year					916	4.2	2	80.7	1,41	19	.21

Sherman Creek at Shermandale, Pa.

Location. - Water-stage recorder, lat. 40°19'25", long. 77°10'05", at highway bridge at Shermandale, Perry County, 1½ miles above mouth of Fishing Run. Zero of gage is 421.90 feet above mean sea level.

Drainage area. - 200 square miles.

Records available. - October 1931 to September 1937 in reports of U. S. Geological Survey; September 1929 to September 1937 in reports of Pennsylvania Department of Forests and Waters.

Extremes. - Maximum discharge during year, 9,330 second-feet Apr. 27 (gage height, 9.87 feet), from rating curve extended above 6,500 second-feet; minimum, 5.5 second-feet Nov. 27, Dec. 1 (gage height, 0.73 foot); minimum daily discharge, 17 second-feet Oct. 14, 16.

1929-37: Maximum discharge, 18,800 second-feet Aug. 24, 1933 (gage height, 14.05 feet), from rating curve extended above 6,500 second-feet; minimum, 3.9 second-feet Dec. 1, 1930 (gage height, 0.72 foot); minimum daily discharge, 10 second-feet Dec. 24, 25, 1930.

Maximum stage known, 20.34 feet, from floodmark, July 22, 1927 (discharge not determined).

Remarks. - Records good. Some regulation from power operations upstream.

not determined).

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	56	29	41	461	688	386	240	1,120	112	67	198	140
2 3	49	34	47	375	500	360	225	878	106	62	78	121
3	35	35	154	709	376	331	210	738	135	58	53	110
4	26	93	166	555	349	319	196	627	280	52	50	126
5	21	796	133	416	357	319	215	567	138	55	41	128
6	20	270	128	349	298	290	1,220	1,320	103	59	39	169
7	24	156	733	437	297	263	727	878	96	53	87	132
8	27	118	337	583	282	244	572	733	86	50	144	98
9	24	104	235	484	394	240	674	653	99	45	74	83
10	34	82	321	566	533	207	592	557	168	47	102	80
11	34	67	700	1,150	326	200	495	481	117	46	441	77
12	32	57	894	790	304	186	448	450	93	46	313	76
13	31	59	521	610	304	186	395	483	78	43	597	72
14	17	51	335	517	341	182	377	577	83	86	188	67
15	30	51	270	654	345	193	426	500	107	175	118	61
16	17	48	235	541	304	190	382	422	89	115	97	59
17	201	43	282	435	270	172	310	377	76	109	80	69
18	290	42	249	665	256	204	286	331	127	79	76	66
19	94	38	189	766	245	235	274	302	115	68	67	56
05	56	41	917	628	256	327	255	274	82	58	76	54
21	41	41	729	700	443	619	309	251	98	53	79	52
22	40	37	444	1,360	3,400	476	877	232	255	50	362	48
23	33	34	304	1,360	3,400	413	700.	225	151	43	612	47
24	41	39	268	1.300	937	365	547	204	98	47	172	47
25	39	38	278	1,400	749	382	495	182	79	79	126	48
26	39	39	337	1,120	577	469	2,940	162	71	84	785	39
27	39	48	375	880	504	344	6,370	156	49	54	879	39 48
28	37	36	431	700	430	331	5,010	177	73	46	390	50
29	31	44	337	640		306	2,360	156	72	42	263	58
30	33	35	297	577		270	1,500	136	71	45	200	51
31	29		392	601		270 251	,	111		406	172	
		Mon	th		Ma	ximum	Minimu		iean	Per square		off in
						590	17		49.0	0.245		.28
						796	29		86.8	.434		.48
Dece	mber					917	41		557	1.78		.05
						B30	349		735	3.68		.24
Pebi	ruary					400	245		551	2.76		.87
						519	172		599	1.50		.73
Apri	11					370	196		988	4.94		.51
May.						320	111	4	159	2.30	2	.65
June						280	49		110	.550		.61
						406	42		74.8	.374		. 43
	7					200		1	1 3 0	1014		
July						379 169	39		224	1.12		.29

Clark Creek near Carsonville, Pa.

Location. - Water-stage recorder above spillway of Dauphin Consolidated Water Supply Co. dam, lat. 40°27'40", long. 76°44'40", l 3/4 miles southeast of Carsonville, Dauphin County, and 15½ miles above mouth. Zero of gage is 561.97 feet above mean sea level (Dauphin Consolidated Water Supply Co. benchmark).

Drainage area. - 21.6 square miles.

Records available. - September 1937.

Extremes. - Maximum discharge during period, 18 second-feet Sept. 9, 10 (gage height, 1.15 feet); minimum, 9.2 second-feet Sept. 26-28, 30 (gage height, 1.10 feet).

Remarks. - Records fair.

Discharge in second-feet

		Day	September	Day	Septem	nber		
		9	18	20	11			
		10 11	18	21 22	111			
		12	16	23	11			
		15 14	13 13	24 25	11			
		15	13	26	9.			
		16 17	11 13	27	9.			
		18	13	29	11			
Month	Maxir		Minimum	_	ean	Per s	quare Le	Run-off in inches
September	18		9.2	12	2.2	0.56		0.46

Stony Creek near Dauphin, Pa.

Location. - Water-stage recorder, lat. 40°22'45", long. 76°54'31", at Reading Co. railroad bridge 1½ miles northeast of Dauphin, Dauphin County.

Drainage area. - 35.0 square miles.

Records available. - September 1937.

Extremes. - Maximum discharge during period, 16 second-feet Sept. 24 (gage height, 1.68 feet); minimum, 11 second-feet Sept. 25 (gage height, 1.58 feet).

Remarks - Records good. Some regulation from operation of storage dam unstream

Remarks .- Records good. Some regulation from operation of storage dam upstream.

Discharge in second-feet

		Day	September	Day	Sept	tember		
		24 25 26 27	16 14 14 14	28 29 30	ı	4.6.4		
Month	Maxi	mum	Minimum	Me	an	Per	guare	Run-off in inches
September	16	5	14	14.	6	0.4		0.11

Conodoguinet Creek near Hogestown, Pa.

Location. - Water-stage recorder, lat. 40°15'10", long. 77°01'15", 1,000 feet above highway bridge, three-eights of a mile below mouth of Hogestown Run, and 1 mile northeast of Hogestown, Cumberland County. Zero of gage is 350.25 feet above mean sea level.
Drainage area. - 470 square miles.

Drainage area. - 470 square miles.

Records available. - October 1931 to September 1937 in reports of U. S. Geological Survey; September 1929 to September 1937 in reports of Pennsylvania Department of Forests and Waters.

Extremes. - Maximum discharge during year, 9,580 second-feet Apr. 27 (gage height, 9.66 feet); minimum, 103 second-feet Oct. 1 (gage height, 1.09 feet).

1929-37: Maximum discharge, 13,100 second-feet Dec. 2, 1934 (gage height, 11.32 feet); minimum, 24 second-feet Dec. 16, 1930.

Remarks. - Records excellent except those for periods of recorder failure, Nov. 27 to Dec. 3, Feb. 20-24, which are fair and were determined from weather records, one discharge measurement, and by comparison with records for stations in adjacent drainage areas. Some regulation at low stages from power operations upstream. upstream.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	147	125	120	1,190	1,420	810	403	2.040	319	303	365	478
2	163	122	135	1,070	1,240	750	388	1,580			262	
3	166	128	250	1,280	945	720	365		328	295		400
4	137	135	362	1,240	872	672	351	1,310	324	280	240	354
5	122	374	388	938	810	649	360	1,140	1,370 546	265 258	218 211	404 534
6	118	789	352	750	750	616	808	1,620	408	268	202	
7	118	487	1,320	800	708	578	1,110	1,520	370		499	638
8	118	370	1,240	1,170	696	544	810	1,240		265		519
9	118	319	720	1,070	848	522	872		337	244	390	405
10	133	288	818	1,200	1,300	490	970	1,200	396 2,180	231 227	303 270	345 299
11	160	240	1,480	2,410	1,030	469	810	840	2,030	241	2,070	280
12	179	197	2,000	1,820	840	459	708	750	847	205	1,690	272
13	146	180	1,400	1.340	810	438	632	720	604		2,140	
14	128	168	970	1,070	840	443	583	1,050	524	224	793	262
15	118	164	750	1,070	840	443	588	938	555	230	529	248
16	118	157	632	1,140	750	443	627	750	473		410	221
17	192	149	702	938	702	418	522	702	410	1,420	345	221
18	1,270	138	654	1,110	654	453	464	638	453	866	311	
19	694	130	550	1,500	632	495	438	594		1,300	292	221
20	423	128	1,030	1,340	800	544	413	561	534 468	966 593	276	211 199
21	301	122	1,460	1,310	900	752	413	522	439	407	1,040	196
22	244	125	1,040	1,860	4,000	810	920	490	1,050	463 391	690	187
23	211	122	780	3,070	2,500	684	1,100	485	784			
24	185	125	605	2,860	1,900	610	840	485		341	1,330	179
25	162	122	572	2,950	1,580	588	720	438	514 424	320 311	719 524	175 172
26	159	122	583	2,530	1,200	627	2,060	423	368		777	
27	156	120	583	1,860	1,040	544	8,090	413		272		169
28	148	115	632	1,460	905	490	8,580	418	341	254	3,550	164
29	136	110	666	1,240	300	474	6,260	403	341	231	1,650	172
30	133	120	605	1,240		438			354	221	972	178
31	128		676	1,140		423	2,900	379 351	320	221 608	697 5 61	184

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	1,270	118	217	0.462	0.53
November	789	110	200	.426	.48
December	2,000	120	777	1.65	1.90
January	3,070	750	1,483	3.16	3.64
February	4,000	632	1,125	2.39	2.49
March	810	418	561	1.19	1.37
April	8,580	351	1,470	3.13	3.49
May	2,040	351	839	1.79	2.06
June	2,180	319	614	1.31	1.46
July	1,420	205	432	.919	1.06
August	3,550	202	785	1.67	1.92
September,	638	164	284	.604	.67
The year.	8,580	110	730	1.55	21.07

Swatara Creek at Harper Tavern, Pa.

Location. - Water-stage recorder, lat. 40°24'10", long. 76°34'35", at highway bridge at Harper Tavern, Lebanon County, 6 miles northwest of Annville and 8½ miles below mouth of Little Swatara Creek. Zero of gage is 355.53 feet above mean sea level.

Sea level.

Drainage area. - 333 square miles.

Records available. - October 1919 to September 1921, October 1931 to September 1937

in reports of U. S. Geological Survey; December 1918 to September 1937 in reports of Pennsylvania Department of Forests and Waters.

Average discharge. - 18 years, 530 second-feet.

Extremes. - Maximum discharge during year, 5,200 second-feet Feb. 22 (gage height, 7.75 feet); minimum gage height, 0.09 foot Dec. 1 (affected by ice, discharge not determined); minimum daily discharge (estimated), 45 second-feet Dec. 1.

1918-37: Maximum discharge, 25,300 second-feet Aug. 24, 1933 (gage height, 17.53 feet); minimum, 8 second-feet Sept. 24, 25, 1932 (gage height, 0.03 foot).

Remarks. - Records good except those for period of ice effect, Nov. 27 to Dec. 2, which are fair and were determined from gage heights, weather records, and by comparison with records for stations in adjacent drainage areas. Some regulation at low stages from power operations upstream. low stages from power operations upstream.

Daily and monthly discharge, in second-feet, 1936-37

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept
1	176	54	45	1,210	1,630	708	399	1,260	146	295	506	
2	150	53	60	864	1,110	654	372	1,050	131		506	44
3	80	53	1,260	1,400	894	594	341	894		223	214	29:
4	59	70	428	1,160	810	552			123	170	142	248
5	52	342	265	930	756	558	321 312	762 678	173 147	154	115	22'
							011	070	7.57	140	100	212
6	48	272	335	762	666	494	1,020	786	118	348	91	22'
7	48	156	1,410	1,010	594	448	933	738	105	202	742	
8	56	128	650	1,230	558	410	714	594	91			19'
9	69	149	448	1,020	786	394	804	582		143	1,620	170
10	86	132	580	1,320	1,000	341	846	482	108 517	148	503 346	154 143
11	115	105	1,090	1,600	594	770	25.0				0.20	140
12	94	91				336	636	410	264	98	933	134
	67		1,490	1,320	499	321	558	367	159	98	2,080	137
13		87	960	1,110	499	312	499	346	115	89	2,800	128
14	59	84	726	960	989	307	476	432	105	106	1,210	118
15	57	82	582	1,690	950	321	523	499	115	264	780	113
16	54	80	527	1,390	768	312	499	388	103	270	504	2.00
17	269	69	1,410	1,110	648	283	415	388	97		564	105
18	236	61	862	1,780	588	341	383	346		168	432	108
19	129	56	654	1,620	523	362	357		660	134	362	118
20	98	55	2,970	1,360	494	528	331	302 283	1,110	115 98	358 542	108
21	82	59	1,960	1,290	578	3 040						30
22	72	55		1,870		1,040	362	252	364	94	269	87
23	63	53	1,310	1,070	3,920	990	1,400	231	930	84	272	84
			930	2,770	2,420	834	1,320	227	485	218	1,470	82
24	57	55	750	2,170	1,750	726	1,020	208	312	334	930	80
25	57	55	648	2,830	1,420	738	870	186	257	166	672	80
26	61	55	588	2,450	1,110	870	1,030	180	220	190		
27	61	54	534	1,840	960	618	2,020	180			630	72
28	57	51	517	1,490	804	570	2,360		193	260	804	72
29	53	49	432	1,360	002	511	2,000	336	215	126	672	72
30	52	47	394	1,200			1,910	279	231	94	494	78
31	54		870	1,470		465 426	1,550	201	197	87	421	74
								101		302	377	
		Mon				kimum	Minimu		fean	Per squa		off in
Doto	ber					269	48		86.2	0.259		.30
HOAGI	mber					342	47		90.4	.271		.30
Decei	mber				2.	970	45		828	2.49		
anu	ary				2.	830	762		471	4.42		.87
Febr	narv					920	494		011	3.04		.10

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October November December January February March April May June July August September	269 342 2,970 2,830 3,920 1,040 2,360 1,260 1,110 348 2,800 444	48 47 45 762 494 283 312 167 91 84 91 72	86.2 90.4 828 1,471 1,011 528 819 453 273 172 692 142	0.259 .271 2.49 4.42 3.04 1.59 2.46 1.36 .820 .517 2.08 .426	0.30 .30 2.87 5.10 3.17 1.83 2.74 1.57 .92 .60 2.40
The year	3,920	45	546	1.64	22.28

Manada Creek at Manada Gap, Pa.

Location. - Water-stage recorder and concrete control, lat. 40°23'55", long. 76°42'40", at highway bridge at Manada Gap, Dauphin County, 3 miles northwest of Shellville, and 9 miles above mouth.

Drainage area. - 13.5 square miles.

Records available. - September 1937.

Extremes. - Maximum discharge during period, 7.8 second-feet Sept. 17 (gage height, 1.95 feet); minimum, 4.7 second-feet Sept. 26, 27 (gage height, 1.83 feet).

Remarks. - Records excellent.

Day	Oot.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1 2 3 4 5												
7 8 9 10												
11 12 13 14 15												
16 17 18 19 20												6.2 7.0 6.2 6.0 5.6
21 22 23 24 25												5.6 5.4 5.2 5.2 4.9
26 27 28 29 30 31												4.9 4.7 5.5 5.2 4.9

Month	Maximum	Minimum	Mean	Per square mile	Run-off in
October November December January February March April May June July August September 16-30	7.0	4.7	5.50	0.407	0.23
The year			3.00	0.301	0,20

West Conewago Creek near Manchester, Pa.

SUSQUEHANNA RIVER BASIN

Location. - Water-stage recorder, lat. 40°04'55", long. 76°43'10", 500 feet above Manchester-York Haven highway bridge and 1½ miles north of Manchester, York County. Zero of gage is 263.04 feet above mean sea level.

Drainage area. - 510 square miles.

Records available. - October 1928 to September 1937.

Extremes. - Maximum discharge during year, 12,900 second-feet Apr. 27 (gage height, 12.08 feet); minimum, 28 second-feet Nov. 30 (gage height, 1.91 feet); minimum daily discharge, 42 second-feet Dec. 1.

1928-37: Maximum discharge, 47,600 second-feet Aug. 24, 1933 (gage height, 24.14 feet); minimum, 2 second-feet Aug. 7, 8, Oct. 20, 1930.

Remarks. - Records fair. Discharge for period of recorder failure, Jan. 17-26, determined by comparison with records for stations in adjacent drainage areas. Regulation at low stages from operation of gristmills upstream.

Daily and monthly discharge, in second-feet, 1936-37

Day	Oot.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	77	60	42	1,850	2,960	677	328	1,250	181	1,050		
2	81	64	117	853	1,250	646	311	1,010	163	7,050	87	148
3	99	57	722	1,860	797	610	294	853		322	97	129
4	82	60	634	1,210	703	581	271	722	177	188	94	108
5	68	77	307	709	684	564	271	628	438 340	138 167	82 71	94 98
6	49	126	259	564	610	521	643	994	213	508		
7	53	127	1,520	741	616	466	845	1,010	169		68	521
8	83	97	692	1,720	658	433	452	615		347	417	366
9	62	90	318	1,170	1,420	416	442		144	234	315	194
10	61	102	384	1,610	3,320	382		1,450	203	186	142	148
					0,020	302	646	756	797	134	134	121
11	126	103	1,230	3,140	1,340	347	476	542	533	111	106	105
12	177	85	1,860	1,410	846	354	394	452	314	103	177	
13	99	82	742	1,010	790	347	358	416	240	96		93
14	80	72	452	860	1,380	343	340	534	178	105	293	82
15	72	68	340	1,710	1,560	366	347	664	156	193	170	78 73
16	61	65	314	1,820	965	378	370	491	150	2 240		
17	487	59	2,030	860	818	362	340		152	1,140	92	70
18	1,140	62	1,150	2,500	749	420	294	420	161	355	66	70
19	294	60	506	2,000	716	532	321	416	990	408	74	62
OS	172	59	3,410	1,700	1,150	1,150		351	1,540	505	61	64
					1,100	1,100	332	328	652	239	57	63
21	127	58	2,510	2,000	1,040	1,360	290	290	288	212	80	54
22	105	59	1,090	4,000	9,050	1,040	607	268	425	225	358	68
23	93	57	696	7,000	3,500	684	920	284	571	150	1,730	
24	86	51	537	6,000	1,980	570	526	294	238	123	553	63
25	80	55	506	7,500	1,480	542	407	252	171	136	247	54 51
86	77	58	490	2,300	1,130	696	1,560	223	138	100		
27	70	63	480	1,570	928	526	10,400	221		188	450	45
88	71	61	526	1,170	811	429	6,730		121	220	1,320	47
29	71	58	485	1,090	022	407		261	114	213	768	47
30	68	50	390	1,300		374	3,040	255	132	130	318	45
	60						1,770	261	268	100	216	55
31	60		762	1,550		340	1,770	200	268	100	216 178	

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October November December January February March April May June July August September	7 500	49 50 42 564 610 340 271 200 114 96 57 45	140 71.5 823 2,090 1,545 544 1,144 539 340 269 288 107	0.275 .140 1.61 4.10 3.03 1.07 2.24 1.06 .667 .527 .565	0.32 .16 1.86 4.73 3.16 1.23 2.50 1.22 .74 .61
The year.	10,400	42	654	1.28	17.41

Codorus Creek at Spring Grove, Pa.

Location. - Water-stage recorder, lat. 39°52'10", long. 76°51'55", at highway bridge at Spring Grove, York County. Zero of gage is 436.22 feet above mean sea level. Drainage area. - 74.3 square miles.

Records available. - March 1932 to September 1937 in reports of U. S. Geological Survey,
April 1929 to September 1937 in reports of Pennsylvania Department of Forests

and Waters.

Extremes.- Maximum discharge during year, 2,210 second-feet Feb. 22 (gage height, 6.92 feet); minimum, 3.4 second-feet Oct. 4, 24 (gage height, 0.38 foot); minimum daily discharge, 7.1 second-feet Oct. 31.

1929-37: Maximum discharge, 11,200 second-feet Aug. 23, 1933 (gage height, 11.84 feet), from rating curve extended on basis of computed discharge over dam upstream; minimum recorded, 0.8 second-foot Sept. 20, 1936 (gage height, 0.23 foot); minimum daily discharge, 2.0 second-feet Sept. 20, 1936.

Remarks.- Records good except those for periods of recorder failure, Jan. 8-18, Jan. 27 to Feb. 11, which are fair and were determined from range lines on recorder chart and by comparison with records for stations in adjacent drainage areas. Regulation at low stages from operation of paper mill above station.

Day	Oot.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	48	9.3	10	51	250	134	54	161	36	113	00	0.
2	11	11	81	55	200	127	52	138	34		29	23
3	9.2	10	56	83	170	116	49	121	51	51	28	2.
4	7.8	17	22	59	150	114	47	109	80	44	26	19
5	11	24	22 15	49	130	108	50	102	39	39 61	25 24	2: 1: 1: 6:
6	9.9	15	75	44	110	98	89	200				
7	10	11	111	92	100	88	56	108	35	108	24	4:
8	10	14	29	65	170	86		92	44	59	49	28
9	18	20	21	50	250	00	50	101	36	44	46	24
10	29	13	35	70	750	81	55	92	33	39	28	20
		10	33	70	350	70	51	77	34	37	57	20
11	18	12	84	150	200	74	47	69	87	36	65	19
12	12	11	78	100	116	70	45	64	41	37	50	ī
13	11	13	39	80	114	70	43	69	35	31	31	î
14	10	10 12	28	60	207	68	44	101	35	32	26	î
15	10	12	24	75	127	74	50	86	39	63	24	18
16	12	11	36	60	124	74	56	70	31	46	24	1
17	46	8.1	145	60	114	81	45	68	160	117		14
18	20	9.3	52	300	105	88	42	60	132	174	22	14
19	14	9.6	67	137	119	117	44	63	132		22	14
20	12	9.7	306	224	116	111	41	56	47	49	21 38	13
21	11	10	98	357	280	127	55	67	0.7			
22	10	9.0	63	294	1,170	94	85	53	63	36	174	12
23	11	11	46	319	429	86		54	275	33	176	12
24	8.6	13	42	252	311		59	60	55	89	74	12 12 12 12
25	9.8	13	40	307	311	80	52	49	38	66	33	12
			20	307	258	84	50	45	36	36	49	12
85	9.9	11	39	220	195	75	498	43	34	42	126	12
27	30.9	11	37	190	173	67	460	46	34	36	82	12
28	10	8.0	36	170	148	65	487	48	40	31	42	12 12 15 15
29	10	9.8	33	180		60	268	47	47	29	31	15
30	11 7.1	12	32	160		57	198	40	227	28	27	13
31	7.1		57	350		56		36		39	26	10

01 102 37 350	56		36	39	26
Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	48	7.1	14.1	0.190	0.22
November	24	8.0	11.9	.160	.13
December	306	10	59.3	.798	.92
January	357	44	150	2.02	2.33
February	1,170	100	221	2.97	3.09
maron	134	56	87.1	1.17	1.35
April	498	41	107	1.44	1.61
-ay	161	36	75.1	1.01	1.16
June	275	31	67.0	.902	1.01
July	174	28	54.4	.732	.34
August	176	21	48.4	.651	.75
September	61	12	18.4	.248	.29
The year	1,170	7.1	75.3	1.01	13.74

South Branch of Codorus Creek near York, Pa.

Location. - Water-stage recorder, lat. 39°55'10", long. 76°45'00", just below dam of pumping station of York Water Co., half a mile above confluence with Codorus Creek, and 3 miles southwest of York, York County. Zero of gage is 373.03 feet above mean sea level.
Drainage area. - 117 square miles.

Records available. - October 1931 to September 1937 in reports of U. S. Geological Survey; May 1925 to September 1937 in reports of Pennsylvania Department of Forests and Waters.

Forests and Waters.

Average discharge. - 10 years (1927-37), 133 second-feet.

Extremes. - Maximum discharge during year, 2,890 second-feet Feb. 22 (gage height, 7.67 feet); minimum, 0.8 second-foot Nov. 19 (gage height, 0.13 foot); minimum daily discharge, 7.1 second-feet Nov. 28.

1925-37: Maximum discharge, 19,300 second-feet Aug. 23, 1933 (gage height, 17.97 feet, from floodmark in gage house), from rating curve extended on basis of contracted-opening determination; minimum, 0.8 second-foot Aug. 28, 1935, Nov. 19, 1936; minimum daily discharge, 5.5 second-feet Sept. 24, 1936.

Remarks. - Records fair. Regulation from pumping plant upstream. Municipal water supply for York diverted above station not included in records except in part of monthly table. Record of monthly diversion furnished by York Water Co.

Daily and monthly discharge, in second-feet, 1936-37

		Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	49	19	11	75	218	209	89	241	60	139	43	42
2	14	13	75	58	168	195	87	218	57	65	33	40
3	13	15	111	95	144	181	82	189	60	56	42	40 37
4	16	24	36	74	138	172	83	172	146	57	38	33
5	16 9.3	30	36 25	63	138	165	83	161	68	188	28	33 92
6	11	19	42	56	130	152	162	161	59	330	23	88
7	11	18	140	93	129	145	99	143	58	150	56	56
8	16	20	51	95	160	134	89	149	58	100	41	45 42
9	29	30	35	80	183	132	94	156	50	84	29	42
10	37	21	41	98	223	113	91	124	51	74	46	40
11	38	16	69	140	150	116	84	113	114	70	46	35 41
12	19	17	95	113	137	112	78	109	72	65	40	41
13	14	18	52	92	136	110	80	113	60	58	37	36
14	15	19	38	87	191	113	74	149	64	68	29	35 30
15	14	20	32	104	150	122	82	140	85	111	28	
16	20	12 12	33	91	145	118	99	113	54	93	28	29 32 32 35
17	68	12	46	90	134	117	76	176	131	144	26	32
18	34	14	67	227	132	129	77	100	231	326	37	32
19	98	12	61	145	127	147	7/4	62	163	83	27	35
20	25	14	344	184	134	162	69	59	89	65	25	29
21	20	15	98	318	182	171	87	55	71	55	78	29 24 28 27
22	15	15	83	303 312	1,620 592	139	164	74	286	47	224	24
23	14	13	62	312	592	124	115	109	81	147	80	28
24	15 18	19	56	272	452	119	86	80 76	63	92	54	26
25	18	14	55	350	372	123	83	76	58	48	63	26
26	15	16	53	274	301	119	375	73	53	48	83	32 28 35 35 30
27	16	12	49	222	268	104	513	78	51	64	96	28
85	15	7.1	51	189	239	107	632	92	79	37	56	35
29	15	16	43	192		98	383	73	68	33	51	35
30	16 14	13	44 65	172 231		94	293	72	109	33 59	45 45	30

		Observed		Diversion	Correct	ed for diver	ion
Month	Maximum	Minimum	Mean	(Mean)	Mean	Per square mile	Run-off in inches
October	98	9.3	23.3	14.1	37.4	0.320	0.37
November	30	7.1	16.8	14.1	30.9	.264	.29
December	344	11	66.5	13.8	80.3	.686	.79
January	350	56	158	13.2	171	1.46	1.68
February	1,620	127	253	12.8	266	2.27	2.36
March	209	91	133	13.3	146	1.25	1.44
April	632	74	149	14.1	163	1.39	1.55
May	241	55	119	13.2	132	1.13	1.30
June	286	50	88.3	14.1	102	.872	.97
July	330	33	96.4	14.3	111	.949	1.09
August	224	23	50.9	14.3	65.2	.557	.64
September	92	24	38.1	13.9	52.0	.444	.50
The year	1,620	7.1	98.5	13.8	112	.957	12.98

Conestoga Creek at Lancaster, Pa.

Location. - Water-stage recorder, lat. 40°03'00", long. 76°16'40", at Pennsylvania Railroad bridge 500 feet below diversion dam of city waterworks and three-quarters of a mile east of Lancaster, Lancaster County. Zero of gage is 244.74 feet above mean sea level.

244.74 feet above mean sea level.

Drainage area. - 322 square miles.

Records available. - September 1928 to September 1937.

Extremes. - Maximum discharge during year, 3,240 second-feet June 18 (gage height, 6.95 feet); minimum, 19 second-feet Nov. 4 (gage height, 2.49 feet); minimum daily discharge, 48 second-feet Nov. 2.

1928-37: Maximum discharge, 22,800 second-feet Aug. 24, 1933 (gage height, 17.52 feet, from floodmark in recorder shelter), from rating curve extended above 3,500 second-feet by slope-area method; probably no flow at times; minimum daily discharge observed, 9 second-feet Oct. 14, 1931, Sept. 15, 23, 1932.

15, 23, 1932.

Remarks. - Records excellent. Regulation from operation of waterworks. Water supply for city of Lancaster diverted above gage not included in records except in part of monthly table. Record of diversion furnished by city of Lancaster.

Day	Oot.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	136	52	61	531	1,280	554	331	606	212	486	284	
2	164	48	71	293	777	535	321	560	200	257	212	283
3	104	64	308	414	618	510	297	517	190	200		261
4	74	59	177	460	632	486	288	480	220	190	166	238
5	64	84	120	307	618	492	297	457	197	249	145	212
6	72	103	113	265	592	457	664	439	180	1,070	128	
7	64	86	1,030	375	566	422	495	498	183			279
8	80	73	322	631	580	417	352	433	173	460	380	243
9	97	79	186	428	625	400	357	535	151	312	310	208
10	90	115	160	594	756	357	411	451	250	265 231	325 237	193 193
11	80	86	205	1,070	554	367	341	373	239	208	232	
12	95	78	577	632	474	352	321	347	220	216		180
13	84	66	270	541	468	347	288	331	166		313	157
14	77	71	208	486	920	352	283	479	166	197	723	180
15	62	64	176	636	760	373	317	700	166	190 216	291	180 163
18	63	58	160	700	573	362	347	480	157	293		
17	65	69	437	486	523	341	288	405	154	212	190	160
18	115	66	344	1,060	504	394	274	367	404		180	151
19	103	61	228	772	474	394	302	341		176	170	157
20	87	59	1,160	645	468	541	270	331	1,640	183 176	157	136 154
21	72	56	658	777	480	863	274	307	307	160		
22	69	59	394	1,260	1,840	728	867	392	402		295	145
23	62	56	297	1,760	1,060	510	744	488	296	157	542	139
24	64	67	257	1,220	850	457	474	331		344	1,470	133
25	50	70	239	1,690	770	445	417	283	231	226 204	769 486	136 130
26	54	59	239	1,280	679	529	440	265	192			
27	71	59	220	1,000	652	411	1,510	326		481	417	115
28	67	66	231	872	586	394	1,010		316	608	480	120
29	62	56	193	850	200	378	1,090	321	227	239	586	139
30	55	50	193	799			842	279	223	183	383	136
31	61	00	232	926		357	700	243	303	178	336	126
<u> </u>			202	920		341		227		646	307	

Month		Observed		Diversion	Corrected for diversion				
Monta	Maximum	Minimum	Mean	(Mean)	Mean	Per square mile	Run-off in inches		
October	164	50	79.5	11.0	90.5	0.281	0.32		
November	115	48	68.0	10.7	78.7	.244	.27		
December	1,160	61	305	10.5	316	.981	1.13		
January	1,760	265	766	10.1	776	2.41	2.78		
February	1,840	468	699	10.0	709	2.20	2.29		
March	863	341	447	9.87	457	1.42	1.64		
April	1,510	270	473	3.0.5	484	1.50	1.67		
May	700	227	406	10.7	417	1.30	1.50		
June	1,640	151	280	11.8	292	.907	1.01		
July	1,070	157	297	11.4	308	.957	1.10		
August	1,470	128	355	11.8	367	1.14			
September	283	115	175	11.4	186	.578	1.31 .64		
The year	1,840	48	361	10.8	372	1.16	15.66		

Muddy Creek at Castle Fin, Pa.

Location.- Water-stage recorder, lat. 39°46'25", long. 76°19'00", l mile below feet above mean sea level.

Drainage area.- 133 square miles.
Records available.- October 1928 to September 1937.

Extremes.- Maximum discharge during year, 4,340 second-feet July 5 (gage height, second-feet Dec. l.

8.28 feet); minimum, 6.0 second-feet Nov. 30; minimum daily discharge, 30

1928-37: Maximum discharge, 16,600 second-feet Aug. 23, 1933 (gage height, second-feet, from floodmark in gage shelter), from rating curve extended minimum gage height, 0.90 foot Nov. 29, 1930 (discharge over power dam upstream; daily discharge observed, 20 second-feet July 29, 1931.

Remarks.- Records fair. Discharge for period of missing gage record, Aug. 24-27, Regulation from operation of hydroelectric plant upstream.

Daily and monthly discharge, in second-feet, 1936-37

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	124	43	30	112	232	225	100					Jopu.
2	58	45	123	100	177		123	284	113	171	145	92
3	44	55	169	143	169	216	113	255	115	125	133	
4	49	59	80	121		203	116	236	130	104	123	93
5	45	76	51	98	203	193	114	219	193	99	123	91
		,0	21	98	162	193	125	216	125		120	94
6	48	68	00	3.00				~~~	120	1,060	117	192
7	44		92	105	147	181	385	215	117	200		
8	57	31	298	121	145	174	178	203		629	115	142
	57	78	88	137	172	166	159	203	105	399	251	97
9	68	62	78	119	180	159		191	115	328	183	89
10	110	60	74	109	212	150	162	192	107	304	136	82
					~_~	130	160	177	105	250	144	84
11	98	50	98	161	156	350					-11	04
12	60	50	143	136	1.00	150	141	165	180	219	128	
13	45	55	86	100	148	145	134	156	134	217		93
14	61	53		125	145	145	125	205	102		123	66
15	43		61	106	199	146	128	298		209	125	89
10	40	52	76	159	168	153	138	224	98 146	210	120	88
16	56							224	140	239	110	80
	50	49	58	144	162	150	148	177				
17	98	43	190	144	153	150	128		111	244	81	84
18	83	52	96	288	142	161	120	181	164	260	87	86
19	58	47	132	190	142	175	114	159	338	415	98	32
os	57	49	600	232	155		120	164	263	226	96	69
				202	100	188	115	153	147	216	106	09
21	44	55	168	313	000					220	100	82
22	50	55	125	286	206	197	142	148	153	213	04	
23	52	47	82	200	1,750	165	317	147	318	203	84	81
24	53	50		295	534	152	190	171	139	203	199	77
25	53		102	254	410	145	160	144		241	320	75
50	55	58	94	333	350	153	141	136	115	229	150	80
	63						***	130	106	211	110	67
86	51	51	77	267	295	148	725	7.70				
7	60	48	72	226	267	133		136	113	214	300	74
8	59	42	59	200	243	132	266	139	99	162	220	69
9	54	46	72	202	~ 10		613	151	150	128	136	81
0	56	48	71	184		130	406	133	133	125	129	
1	64		103	230		123	331	128	123	128	111	86
			100	200		123		127		197	106	78

Month	Maximum	Minimum	Mean	Per square	Run-off in
October November December January February March April May June July August September	124 78 600 333 1,750 225 725 298 338 1,060 320 192	43 31 30 98 142 123 113 127 99 81 66	61.4 52.6 118 182 265 162 207 182 145 257 142 88.1	0.462 .395 .887 1.37 1.99 1.22 1.56 1.37 1.09 1.93 1.07	0.53 .44 1.02 1.58 2.07 1.41 1.74 1.58 1.22 2.22 1.23
The year	1,750	30	155	1.17	15.78

POTOMAC RIVER BASIN

Evitts Creek near Bedford Valley, Pa.

Location. - Water-stage recorder, lat. 39°47'23", long. 78°38'48", 2 miles above
Thomas W. Koon Dam, half a mile above backwater from dam, and 3 miles south
of Bedford Valley post office, Bedford County.

Drainage area. - 30.2 square miles.

Records available. - September 1932 to September 1937.

Extremes. - Maximum discharge during year, about 2,040 second-feet Apr. 26 (gage
height, 4.64 feet); minimum, 2.6 second-feet Oct. 4-8 (gage height, 1.08 feet).
1932-37: Maximum discharge, about 5,240 second-feet Mar. 17, 1936 (gage
height, 7.13 feet), from rating curve extended on basis of slope-area determination; minimum, 1.2 second-feet July 27, 1934 (gage height, 0.96 foot).

Maximum stage known, about 8 feet, from floodmark, date unknown (discharge
not determined).

Remarks. - Records good except those above 400 second-feet and those for periods of
missing gage record, Dec. 1-20, 23-27, Feb. 2-16, which are fair. Discharge
for periods of missing gage record determined by comparison with records for
stations in adjacent drainage areas. Records furnished by U. S. Geological
Survey, Washington, D. C.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	6.5	5.7	5.2	67	62	37	26	113	15			
2	4.2	6.2	7.0	84	45	36	25	89		8.7	3.6	9.8
3	2.9	6.8	12	110	37	35	24	74	14	6.8	3.4	8.4
4	2.7	39	14	74	35	35	22		14	9.8	3.0	7.7
6	2.6	90	12	57	33	36	27	64 64	14 15	7.4 6.8	2.9	9.4 23
6	2.7	28	30	49	32	34	42	89	12	6.8		
7	2.6	23	100	89	32	32	30	60	12		7.7	28
8	9.6	20	80	85	70	30	30	58	11	6.0	4.8	13
9	6.5	18	60	74	80	30	50	52	16	5.5	4.0	11
10	5.5	15	55	305	75	27	43	46	19	5.0 4.8	4.2	9.0
11	5.2	14	90	247	68	27	38	42	18	6.2	7.7	
12	4.0	13	105	151	61	26	37	38	12	9.8	4.6	9.8
15	3.2	12	95	105	55	25	35	42	11	7.4	3.6	9.0
14	3.0	12	70	87	50	26	35	45	10	9.0	3.2	7.1
15	2.9	12	55	76	45	25	38	37	12	8.4	2.9	6.2
16	5.2	11	48	60	40	24	34	34	11	5.7	2.7	5.7
17	240	10	48	65	36	26	30	35	11	5.0	2.7	6.8
18	35	9.4	40	113	35	30	28	32	13	6.5	3.8	6.0
19	16	8.7	34	72	34	35	32	30	10	5.5	4.0	5.7
20	12	8.7	50	72	34	48	28	28	9.4	5.2	3.4	5.2
21	10	8.7	40	136	63	64	34	26	9.8	4.8	6.5	5.0
22	9.0	8.4	32	281	168	43	74	25	13	8.6	41	4.8
23	8.7	8.0	30	271	78	41	52	26	8.7	6.8	16	4.6
24	8.4	8.0	32	198	69	40	46	23	7.7	4.8	7.7	4.4
25	7.4	7.7	40	198	60	43	164	22	7.1	4.4	13	4.4
26	8.4	7.1	50	142	47	40	1,450	20	6.8	4.0	168	4.2
27	7.4	6.5	90	108	43	34	569	22	8.0	3.8	64	4.2
88	6.5	6.2	103	89	40	33	435	22	14	3.6	22	4.6
95	6.2	6.8	64	82		30	237	22	8.0	3.4	15	4.8
30	6.0	6.2	58	72		28	154	18	7.4	3.4	13	4.4
31	5.7		104	67		28		16	_/	3.4	11	

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	240	2.6	14.7	0.487	0.56
NOVEMBER	90	5.7	14.5	.480	.54
December	105	5.2	53.3	1.76	2.03
January	305	49	119	3.94	4.54
February	168	32	54.5	1.80	1.87
maron	64	24	33.8	1.12	1.29
April	1,450	22	129	4.27	4.76
may	113	16	42.4	1.40	1.61
June	19	6.8	11.6	.384	
July	9.8	3.4	6.04	.200	.43 .23 .56
August	168	2.7	14.8	.490	56
September	28	4.2	8.00	.265	.30
The year	1,450	2.6	41.7	1.38	18.72

Licking Creek near Sylvan, Pa.

Location. - Chain gage, lat. 39°43'20", long. 78°43'35", at highway bridge 200 feet north of Pennsylvania-Maryland State line, 3 miles southwest of Sylvan, Franklin County, and 10 miles above mouth. Zero of gage is 434.16 feet above mean sea level.

Drainage area.- 158 square miles.

Records available.- June 1930 to September 1937.

Extremes.- Maximum discharge during year, 14,500 second-feet Apr. 26 (gage height, 15.20 feet, from floodmark), from rating curve extended on basis of contracted-opening determination; minimum, 7.5 second-feet Oct. 4, 7 (gage height, 0.89 foot).

1930-37: Maximum discharge, 20,700 second-feet Mar. 18, 1936 (gage height, 17.4 feet, from floodmark), from rating curve extended on basis of contracted-opening determination; minimum, 3.0 second-feet Aug. 8, 1930 (gage height, 0.64 foot).

Remarks.- Records fair. Discharge for periods of ice effect, Nov. 26 to Dec. 3, Feb. 5-7, determined from gage heights, weather records, and by comparison with records for stations in adjacent drainage areas. Discharge for high stages determined from graphs based on twice-daily gage readings.

Daily and monthly discharge, in second-feet, 1936-37

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	13	16	9.0	382	382	246	116	715	67	42	25	42
2	13	22	9.0	329	304	235	106	535	51	37	18	36
3	8.2	17	35	604	235	214	103	439	59	40	18	29
4	7.8	38	70	470	224	184	94	355	62	34	17	29
5	9.9	519	77	329	200	175	96	235	58	32	16	83
6	8.2	355	82	235	180	166	157	1,100	51	31	14	178
7	7.5	116	466	304	160	157	148	715	47	30	17	108
8	11	82	308	410	235	140	132	569	43	28	16	73
9	15	69	166	355	355	140	175	502	44	26	17	51
10	12	51	140	535	535	124	204	382	304	24	18	40
11	9.1	45	210	1,600	382	109	184	329	148	25	37	32
12	9.5	37	408	755	304	116	166	268	96	32	62	32
13	11	34	280	502	280	106	157	257	67	27	29	3
14	9.9	32	184	355	235	108	148	304	57	29	22	3:
15	9.9	31	157	329	224	109	157	235	83	220	18	28
16	8.6	29	116	292	214	106	175	204	59	262	16	27
17	211	26	132	235	194	106	140	184	71	91	16	24
18	194	25	132	439	166	124	132	166	71	52	16	22
19	105	22	102	604	157	140	148	148	59	40	13	23
20	47	19	410	502	157	157	124	140	52	35	13	2:
21	45	19	382	640	184	214	124	124	60	34	20	23
22	37	20	224	1,260	2,860	292	304	124	214	33	320	19
23	27	19	157	2,010	1,310	257	382	116	105	30	93	19
24	21	19	157	1,260	835	214	304	108	61	26	46	18
25	22	17	132	1,310	640	214	309	96	45	34	40	יו
26	22	16	132	875	439	204	8,850	88	40	30	92	יו
27	24	15	166	470	382	166	5,540	88	37	24	639	16
28	23	14	224	214	304	157	4,950	116	69	22	257	18
29	22	14	204	410		148	1.770	101	48	20	116	10
30	20	12	184	355		124	1,010	77	50	19	81	10
31	19		175	355		124		83		18	51	

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	211	7.5	32.3	0.204	0.24
November	519	12	58.3	.369	.41
December	466	9.0	182	1.15	1.33
January	2,010	214	604	3.82	4.40
February	2,860	157	431	2.73	2.84
March	292	106	164	1.04	1.20
April	8,850	94	880	5.57	6.21
Kay	1,100	77	287	1.82	2.10
June	304	37	75.9	.480	.54
July	262	18	46.0	.291	.34
August	639	13	70.1	.444	.51
September	175	16	37.3	.236	.26
The year	8,850	7.5	237	1.50	20.38

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Allegheny River at Larabee, Pa.

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Location. - Wire-weight gage, lat. 41°54'5", long. 78°23'5", at bridge on U. S.

Highway 6 at Larabee, McKean County, 1 mile below mouth of Potato Creek and 3½ miles south of Eldred. Zero of gage is 1,423.39 feet above mean sea level.

Drainage area. - 541 square miles.

Records available. - October 1920 to September 1921, October 1931 to September 1937

In reports of U. S. Geological Survey; June 1915 to September 1937 in reports of Pennsylvania Department of Forests and Waters.

Average discharge. - 13 years (1920-21, 1925-37), 809 second-feet.

Extremes. - Maximum discharge during year, 5,430 second-feet Jan. 26 (gage height, 13.5 feet, from graph based on gage readings) from rating curve extended above 4,500 second-feet; minimum, 27 second-feet Oct. 5 (gage height, 0.41 foot).

1915-37: Maximum discharge, 8,210 second-feet Nov. 18, 1927 (gage height, 17.6 feet, from graph based on gage readings) from rating curve extended above 4,500 second-feet; minimum, a bout 0.1 second-foot July 25, 1934 (gage height, 0.22 foot); minimum daily discharge, 3.5 second-feet Aug. 8, 1934.

Remarks. - Records fair. Discharge for period of ice effect, Nov. 28 to Dec, 13, determined from gage heights, weather records, and by comparison with records for stations downstream. Discharge for period of missing gage record, June 16-24, determined by comparison with records for stations mentioned above.

Discharge for high stages determined from graphs based on twice-daily gage readings. Some regulation at low stages from power operations upstream.

Day	Oot.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June.	July	Aug.	Sept.
1	40	178	200	3,520	1,550	397	600	4,240	655	421	110	263
2	41	193	210	3,300	1,180	445	683	3,680	740	597	98	373
3	45	545	240	2,950	950	350	740	2,600	683	316	87	32
4	40	780	260	2,440	800	470	890	1,790	521	373	79	
6	30	2,300	270	1,670	740	1,190	1,010	1,590	421	397	77	316 373
6	33	2,100	500	1,430	711	890	1,800	2,440	373	261	74	44
7	30	1,790	400	1,110	655	521	1,960	2,650	350	208	330	294
8	37	1,670	390	1,570	573	850	2,000	2,320	305	178	327	250
9	33	1,470	380	1,710	1,070	655	1,870	2,050	272	168	283	219
10	34	1,280	470	1,790	1,020	495	1,790	1,710	406	168	486	198
11	84	1,080	1,000	1,750	655	495	1,710	1,360	470	994	890	188
12	56	920	1,400	1,590	683	445	1,510	1,180	327	1,070	740	230
13	34	770	1,200	1,510	655	445	1,360	1,350	272	470	470	178
14	28	683	1,040	2,000	627	421	1,390	1,960	1,320	316	421	158
15	35	841	980	3,880	655	373	1,960	1,750	1,510	350	350	138
16	75	810	830	4,770	573	350	2,410	1,790	1,100	445	294	148
17	79	627	800	4,360	445	327	2,140	1,870	900	627	250	104
18	197	573	770	4,180	445	373	1,920	1,870	1,300	521	250	108
19	214	495	601	4,180	495	350	1,750	1,710	2,500	421	250	93
20	128	495	1,340	3,960	445	505	1,550	1,750	2,100	294	250	100
21	89	495	1,930	3,630	421	980	1,320	1,870	1,800	261	208	100
22	72	421	1,670	4,570	792	627	2,780	1,750	3,400	219	1,210	95
23	67	421	1,360	4,830	656	655	3,580	1,320	2,400	198	1,890	95
24	65	397	1,250	4,530	573	711	3,630	1,250	1,600	188	1,040	91
25	67	373	1,430	4,980	600	980	3,200	1,010	1,180	230	770	91
26	218	350	1,590	5,190	470	890	3,100	920	920	240	600	84
27	288	286	1,670	4,650	495	770	3,740	1,080	830	198	547	84
28	178	260	2,370	4,180	421	683	4,180	890	740	148	421	80
29	158	230	2,900	3,410		655	4,770	770	627	138	373	78
30	158	210	2,750	2,460		600	4,590	627	495	119	316	80
31	178		2,950	1,760		573		740		111	283	

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	288	28	91.3	0.169	0.19
November	2,300	178	768	1.42	1.58
December	2,950	200	1,121	2.07	2.39
January	5,190	1,110	3,157	5.84	6.73
February	1,550	421	691	1.28	1.33
March	1,190	327	595	1.10	1.27
April	4,770	600	2,198	4.06	4.53
May	4,240	627	1,738	3.21	3.70
June	3,400	272	1,017	1.88	2.10
July	1,070	111	337	.623	.72
August	1,890	74	444	.821	.95
September	445	79	179	.331	.37
The year	5,190	28	1,031	1.91	25.86

Allegheny River at Franklin, Pa.

Location. - Water-stage recorder, lat. 41°23'25", long. 79°49'10", at Eighth Street Bridge, at Franklin, Venango County, 1,000 feet below mouth of French Creek. Zero of gage is 956.26 feet above mean sea level.

Zero of gage is 956.26 feet above mean sea level.

Drainage area. - 5,982 square miles.

Records available. - October 1918 to September 1921, October 1931 to September 1937 in reports of U. S. Geological Survey; April 1905 to September 1937 in reports of Pennsylvania Department of Forests and Waters.

Average discharge. - 19 years (1918-37), 9,686 second-feet.

Extremes. - Maximum discharge during year, 106,000 second-feet Jan. 25 (gage height, 17.93 feet); minimum, 572 second-feet Oct. 6 (gage height, 1.82 feet).

1905-37: Maximum discharge, 191,000 second-feet Mar. 26, 1913, from rating curve extended above 110,000 second-feet; maximum gage height, 26.0 feet, present datum, Feb. 27, 1917 (affected by ice); minimum discharge, 334 second-feet July 30, 1934 (gage height, 1.63 feet).

Maximum free-flow stage known, 25.0 feet, present datum, Mar. 17, 1865 (discharge, 196,000 second-feet, from rating curve extended above 110,000 second-feet).

Remarks. - Records good except those for periods of faulty recorder operation. Man

Remarks. - Records good except those for periods of faulty recorder operation, Mar. 16-25, 27-31, which are fair and were determined by comparison with records for the stations at Red House and Parkers Landing.

Daily and monthly discharge, in second-feet, 1936-37

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	684	1,980	2,570	35,900	18,900	6,420	8,080	46,900	6,600	6,600	2,110	2,490
2	696	2,180	2,490	29,800	15,200	6,420	9,080	35,900	5,750	5,750	1,970	2,330
3	672	3,340	2,980	25,300	12,000	6,250	11,000	28,500	5,280	5,590	1,850	2,350
4	649	7,860	3,980	21,100	9,720	6,080	12,000	22,900	4,970	5,280	1,710	2,820
5	616	15,200	3,980	17,200	9,500	8,670	11,500	19,400	4,820	6,080	1,630	7,420
6	583	15,700	4,120	13,200	8,670	12,200	15,700	21,700	4,390	5,590	1,610	7,130
7	627	14,200	6,520	11,300	8,080	12,000	21,700	24,700	4,390	4,820	3,280	5,430
8	897	12,400	9,720	24,700	8,470	10,600	19,400	22,300	3,720	3,980	7,540	4,250
9	910	11,800	9,290	31,100	18,000	10,200	17,200	17,800	3,250	3,470	9,140	3,470
10	1,050	10,800	9,080	31,100	27,200	9,080	17,800	15,700	4,520	3,280	7,900	2,910
11	1,110	9,290	10,400	25,900	22,300	7,320	16,200	13,200	6,950	3,980	20,200	2,630
12	994	7,500	13,700	20,000	16,200	6,420	14,200	11,500	6,950	5,660	27,800	2,590
13	924	6,420	13,700	16,200	14,200	6,420	12,700	11,500	5,280	6,950	22,300	2,530
14	884	5,430	10,800	23,000	12,700	5,750	11,300	16,200	11,200	5,750	16,200	2,290
15	858	5,590	9,290	71,700	13,200	5,590	14,500	15,700	22,300	5,430	11,300	2,130
16	832	7,500	7,880	70,300	12,000	5,500	33,800	14,700	16,700	18,200	8,270	2,040
17	1,050	8,080	7,320	54,900	9,930	4,800	32,400	13,700	12,700	16,600	6,420	1,930
18	1,370	7,500	6,770	54,900	8,880	4,900	25,300	15,200	18,300	10,400	5,750	1,830
19	1,710	7,130	5,590	54,900	8,470	5,100	21,700	17,200	38,700	7,500	5,430	1,740
20	1,830	6,420	5,750	44,600	8,270	4,900	20,000	14,700	35,900	5,750	4,680	1,680
21	1,690	5,920	7,500	51,600	9,080	11,000	17,800	12,200	29,800	4,680	4,640	1,610
22	1,600	5,920	9,720	67,600	13,200	14,000	22,600	10,400	55,500	4,120	6,250	1,550
23	1,420	5,920	8,270	58,200	16,200	13,000	31,100	9,930	52,500	3,600	7,690	1,500
24	1,310	5,590	8,080	47,400	14,200	13,000	29,800	10,600	38,100	3,140	6,080	1,440
25	1,240	4,970	8,080	95,400	11,800	16,000	25,600	9,720	24,800	3,070	5,920	1,370
26	1,740	4,530	10,400	87,000	9,500	18,900	66,400	8,270	17,200	3,720	4,970	1,340
27	2,700	3,980	18,900	65,800	8,470	16,000	79,400	8,880	13,200	3,720	4,530	1,310
28	2,720	3,350	31,800	49,300	7,130	13,000	71,200	12,000	11,000	3,250	3,980	1,260
29	2,350	2,980	33,800	35,200		11,000	74,800	11,800	9,290	2,890	3,370	1,200
30	2,130	3,140	29,800	27,200		9,500	60,800	9,500	7,690	2,550	3,000	1,180
31	2,000		32,400	22,300		8,400		7,690		2,290	2,700	
		Mon	th		Ma	ximum	Minimu	n Y	lean	Per squa		off in ohes
Octo	ber				2,	720	583		,285	0.215		.25
MOAG	mber				15,	700	1,980		,087	1.18		.32
Tabe	BUGI				33,	800	2,490		,120	1.86		.14
Pah-	mass.	• • • • • • • •		• • • • • • • • •	90,	400	11,300		,420	6.92		.98
Mara	h				10	200	7,130		,550	2.10		.19
Apri	1				10,	900 400	4,800		,304	1.56		.80
							8,080		,500	4.60		.13
Inne	• • • • • • • •			• • • • • • • • •	40,	900	7,690		,460	2.75		.17
Julie					35,	500	3,250		,060	2.68		.99
Anon	•••	• • • • • • • • •			18,	200	2,290		,603	.937		.08
Sept	ember					800 420	1,610		,104 ,525	1.19 .422		.37 .47
		r			95,							

Allegheny River at Parkers Landing, Pa.

Location. - Water-stage recorder, lat. 41°06'05", long. 79°40'45", at highway bridge at Parkers Landing, Armstrong County, 1.1 miles below mouth of Clarion River. Zero of gage is 845.14 feet above mean sea level.

Drainage area. - 7,671 square miles.

Records available. - October 1932 to September 1937.

Extremes. - Maximum discharge during year, 149,000 second-feet Jan. 25 (gage height, 21.20 feet, from floodmark in gage well); minimum, 741 second-feet Oct. 6 (gage height, 0.93 foot).

1932-37: Maximum discharge, that of Jan. 25, 1937; maximum gage height, 27.85 feet Mar. 5, 1934 (affected by ice); minimum discharge, 409 second-feet July 30, 1934 (gage height, 0.67 foot).

Maximum stage known, 29.0 feet Mar. 17, 1865 (discharge not determined).

Remarks. - Records good except those for period of missing gage record. Oct. 14-17.

Remarks. - Records good except those for period of missing gage record, Oct. 14-17, which are fair and were determined by comparison with records for stations upstream. Regulation at low stages from power operations on Clarion River.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	860	2,700	3,650	47,100	24,000	8,090	10,100	57,100	8,670	7,900	2,800	3,000
2	860	2, 750	3,140	39,800	20,500	8,480	10,800	44,100	7,900	7,350	2,370	2,800
3	860	4,680	3,850	34,200	16,100	8,280	12,200	34,900	7,000	7,170	2,250	2,750
4	914	12,600	4,550	29,000	13,100	7,720	13,600	28,400	6,650	6,320	2,200	3,380
5	792	27,700	5,370	24,000	12,600	10,400	13,100	24,600	6,150	6,650	1,950	7,940
6	758	25,800	5,080	18,800	12,200	14,600	15,600	27,700	6,150	6,320	2,020	9,280
7	932	22,200	7,840	16,100	10,800	14,600	22,200	29,000	5,680	5,830	3,400	7,000
8	775	18,300	11,600	25,800	10,600	13,100	22,800	27,700	5,370	4,780	6,680	5,640
8	1,000	16,100	12,500	37,700	16,500	12,600	21,000	22,800	4,500	4,170	9,480	4,640
10	1,590	14,600	12,200	37,700	29,000	11,700	21,600	19,400	5,270	4,160	9,890	3,740
11	2,020	12,200	14,100	32,900	27,000	10,100	18,800	17,200	7,720	8,000	18,400	3,590
12	1,490	9,900	18,300	27,700	20,500	8,480	17,200	14,600	9,070	10,400	31,000	3,250
13	1,370	9,280	17,800	22,200	18,300	8,540	16,100	15,300	7,560	11,700	25,800	2,920
14	1,600	8,280	15,600	23,600	15,600	7,830	14,100	24,600	7,780	8,860	19,400	2,900
15	1,200	7,090	13,100	78,600	15,100	7,170	16,100	22,800	25,800	12,200	13,600	2,610
16	1,100	7,460	11,200	88,400	15,100	7,170	31,800	20,000	22,200	18,400	9,690	2,390
17	1,400	9,480	10,400	68,400	13,100	6,480	36,300	18,300	16,600	29,000	7,720	2,300
18	2,520	9,280	9,690	65,900	11,500	6,650	29,000	17,800	17,100	18,200	6,820	2,270
19	2,040	8,870	8,480	69,300	10,800	7,000	24,600	20,500	35,600	12,200	6,320	1,910
20	2,660	8,480	9,480	54,700	10,100	6,820	22,800	18,300	39,800	9,280	5,990	1,790
21	2,610	7,720	11,200	66,600	10,600	13,000	21,000	15,600	32,200	7,000	5,680	1,770
22	2,230	7,000	12,600	101,000	13,300	16,100	28,200	14,100	53,900	6,150	7,180	1,770
23	2,090	6,820	12,600	84,800	18,800	15,600	37,700	12,200	60,300	5,360	8,670	1,660
24	1,930	7,350	11,700	64,300	17,200	15,600	38,400	13,100	45,600	4,810	8,090	1,510
25	1,820	6,320	10,800	131,000	14,600	18,800	32,900	12,600	30,600	4,070	7,000	1,660
26	1,950	5,680	13,000	120,000	12,600	22,800	86,300	10,400	22,200	4,290	6,480	1,430
27	3,680	5,080	19,100	83,000	10,800	20,000	106,000	12,300	15,600	4,780	5,680	1,370
28	4,090	4,930	34,300	60,300	9,280	15,600	90,200	16,600	12,200	4,500	5,380	1,370
29	3,860	3,960	41,200	44,100		13,600	93,800	17,200	11,500	3,790	4,010	1,310
30	3,250	3,620	37,000	34,900		12,200	76,100	13,600	9,480	3,300	3,610	1,270
31	3,050		41,200	28,400		10,800		9,900		3,080	3,380	
		Mor	th		Ma	ximum	Minimu	ım l	Mean	Per squa		off in

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	4,090	758	1,848	0.241	0.28
November	27,700	2,700	9,874	1.29	1.44
December	41,200	3,140	14,280	1.36	2.14
January	131,000	16,100	53,560	6.98	8.05
February	29,000	9,280	15,350	2.00	2.08
March	22,800	6,480	11,610	1.51	1./4
April	106,000	10,100	33,350	4.35	4.85
May	57,100	9,900	21,050	2.74	3.16
June	60,300	4,500	18,200	2.37	2.64
July	29,000	3,080	8,065	1.05	1.21
August	31,000	1,950	8,159	1.06	1.22
September	9,280	1,270	3,041	.396	.44
The year	131,000	758	16,550	2.16	29.25

ALIE GHENY RIVER BASIN

107

Ohio River at Sewickley, Pa.

Location. - Water-stage recorder, lat. 40°31'50", long. 80°11'20", 200 feet above highway bridge at Sewickley, Allegheny County, half a mile above mouth of Narrows Run, and 12 miles above Dashields Dam. Zero of gage is 690.00 feet

above mean sea level.

Drainage area. - 19,500 square miles.

Records available. - October 1933 to September 1937.

Extremes. - Maximum discharge during year, 334,000 second-feet Apr. 27 (gage height, 23.93 feet); minimum, 3,200 second-feet Sept. 30 (gage height, 2.70 feet); minimum daily discharge, 3,620 second-feet Sept. 30.

1933-37: Maximum discharge, 574,000 second-feet Mar. 18, 1936 (gage height, 34.75 feet, from floodmark in gage house); minimum, about 2,000 second-feet July 25, 1934; minimum daily discharge, 2,150 second-feet July 25, 1934

Remarks. - Records good. Discharge for period of recorder failure, Jan. 18, 19, determined from graph based on range in stage shown by recorder and trend of hydrographs for stations upstream. Some regulation at low stages from operation of locks upstream.

Daily and monthly discharge, in second-feet, 1936-37

Day	Oot.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
	9,600	10,800	7,160	84,000	53,300	19,600	24,000	106,000	27,100	15,700	7,070	10,700
2	9,200	10,200	7,340	86,200	47,300		21,700	81,800	22,400	13,900	6,480	9,600
3	7,340	13,600	7,430	92,800	39,600		22,400	60,400	23,200	13,700	5,060	8,900
4	5,920	30,600	9,500	90,600	34,000		22,400	50,300	24,700	14,700	5,130	9,600
5	5,130	119,000	10,900	73,000	29,600	20,300	21,700	45,300	21,000	15,700	4,990	12,200
6	4,710	113,000	12,600	55,300	28,800		21,700	48,300	17,600	13,900	5,630	20,800
7	4,500	77,100	32,900	46,300	25,500		26,300	62,500	13,900	12,700	6,860	39,300
8	5,600	53,300	78,500	59,100	24,000		32,200	60,400	12,500	10,400	7,160	32,300
10	5,200	39,600	62,500 45,600	79,600 86,200	66,900		31,300 33,100	50,300	11,400	9,100	14,100	17,600
	22,800				97,200	24,700	33,100	36,700	12,000	11,200	18,200	12,800
11	14,800	31,300	43,000	138,000	69,000	22,400	27,900		14,500	20,300	26,500	10,900
12	10,400	22,400	49,300		51,300	21,000	26,300		15,700	23,200	33,100	9,800
14	8,240	19,600	41,400	64,400	42,400		26,300		14,100	26,300	27,100	8,600
15	6,890	17,600	35,800		34,000		34,900		20,600	29,600	20,300	7,970
16	6,160	15,700	31,300	155,000	35,800	18,900	54,300	54,300	35,800	30,400	15,700	7,520
17	6,890	15,700	27,900		33,100	18,900	66,700		31,300	47,000	12,500	6,640
18	29,100	17,000		136,000	30,400		60,400		25,500	51,300	11,300	6,480
19	34,000	15,700	24,700		27,900		46,300		29,400	33,200	10,000	5,840
20	24,000	15,700	31,600		26,300	34,800	42,400	38,600	49,300	22,400	9,500	5,680
21	18,900	14,700	52,300	154,000	27,100		39,600		47,300	18,200	9,400	5,200
22	14,500	13,600	51,300		27,900				54,300	14,700	13,300	4,920
23	12,200	12,700	43,400		39,600		88,400		86,200	13,400	12,900	4,920
24 25	9,300	12,200	34,900		42,400		81,800 70,900		81,800 60,400	11,600	13,400 13,500	4,360
					33,100	51,300	190,000	23,200	39,600	10,900	24,500	4,290
26	9,800	11,800	29,600 35,900		27,100		321,000			10,300	38,600	4,150
27	14,600	9,600	55,400	131,000	22,400				20,300	10,500	41,000	3,940
28	13,600		77,400		,	34,000				8,900	26,800	3,870
30	13,100	8,900	73,000			30,400					16,300	3,620
31	11,900		68,800			27,100		38,600		7,700	12,600	
		Mor	nth		1	leximum	Minim	um	Mean	Per squa		off in
Oat	ober					34,000	4,50		2,250	0.628		.72
					1	19,000	8,90		7,150	1.39		.55
						78,500	7,16	0 3	7,900	1.94		.24
					_	99,000	46,30		2,000	6.77		.80
					1	000,80	22,40		1,450	2.13		.22
					1	02,000	18,20		4,330	1.76		.03
Apr	il					21,000	21,70		9,580	3.57		.98
May					1	06,000	21,70		5,450	2.33		.69
						36,200	11,40		9,700	1.52		.70 .05
						51,300	7,70		7,800 5,460	.793		.91
						41,000 39,300	4,99 3,62	20 1	0,300	.528		.61
		ear				21,000	3,62	20 3	9,520	2.03	27	.50

Brokenstraw Creek at Youngsville, Pa.

Location. - Chain gage lat. 41°51'05", long. 79°19'05", at highway bridge at Youngsville, Warren County, 1,000 feet above mouth of Mathews Run. Zero of gage is 1,187.92 feet above mean sea level.

Drainage area. - 304 square miles.

Records available. - October 1919 to September 1921, October 1931 to September 1937 in reports of U. S. Geological Survey; October 1909 to September 1937 in reports

in reports of U. S. Geological Survey; October 1909 to September 1937 in reports of Pennsylvania Department of Forests and Waters.

Average discharge. - 23 years (1910-15, 1919-37), 541 second-feet.

Extremes. - Maximum discharge during year, 7,580 second-feet Apr. 27 (gage height, 8.8 feet, from graph based on gage readings); minimum, 30 second-feet Oct. 6 (gage height, 0.10 foot).

1909-37: Maximum discharge, 14,300 second-feet Mar. 25, 1913 (gage height, 13.2 feet, present datum), from rating curve extended above 7,000 second-feet; minimum, 19 second-feet Oct. 14, 1934.

Remarks. - Records fair. Discharge for period of ice effect, Nov. 26 to Dec. 5, determined from gage heights, weather records, and by comparison with records for stations in adjacent drainage areas. Discharge for days of questionable gage record, Mar. 12, May 25, determined by comparison with records for stations mentioned above. Discharge for high stages determined from graphs based on twice-daily gage readings. twice-daily gage readings.

Daily and monthly discharge, in second-feet, 1936-37

ay	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
-	2.7	77	100	1,880	640	336	358	1,320	216	209	102	97
2 3	33			1,000	477	316	452	930	257	181	89	116
2	33	81	110	1,440		310			227	164	81	116
3	33	124	125	1,070	404	295	530	722	200			
4	33	317	150	790	280	295	530	585	198	157	81	187
6	33	590	180	615	380	612	530	558	195	170	81	684
6	30	495	229	472	427	585	1,030	1,060	195	195	93	499
7	59	428	732	506	316	477	1,120	780	184	147	590	316
	54	428	740	2,310	616	558	990	640	174	138	295	213
8				2,020	2,310	558	870	530	144	122	181	14'
9	50	450	615	2,270	2,510				619	138	1,080	138
10	47	382	518	2,150	1,910	427	810	477	019	136	1,000	100
11	47	340	845	1,280	1,040	330	612	404	452	119	1,680	125
12	47	256	955	790	668	180	558	380	253	238	1,610	119
13	47	210	665	640	585	280	452	640	198	170	1,320	11:
	43	160	450	3,820	722	242	427	810	770	125	682	10
14	40	335	405	6,530	695	246	1,900	722	1,340	231	380	9:
	36	428	360	5,120	558	209	2,230	585	558	951	268	9
16				3,220	477	216	1,690	668	477	934	216	8
17	33	382	320	3,220		250	810	695	990	295	242	8
18	100	405	240	3,520	427					213	209	86
19	92	360	130	3,020	427	250	695	585	1,460		209	8:
20	77	320	225	2,040	504	347	585	452	1,180	170	209	8.
21	59	300	280	3,640	585	861	640	380	1,920	164	191	89
22	50	360	264	3,370	1,160	870	1,620	358	3,500	134	272	86
			240	2,440	1,060	930	1,680	477	2,480	116	227	8:
23	47	320		0 170	722	930	1,260	380	1,460	184	181	7:
24	54	300	280	2,130		3 300			640	184	170	6
25	54	225	495	6,250	504	1,180	1,680	350	040	104		
26	150	203	880	4,740	477	990	6,650	295	427	287	1.64	6'
27	124	176	1,790	2,450	404	695	6,790	668	427	198	150	6
	100	157	2,450	1,190	287	585	5,530	530	452	170	1.50	6
28	92	130	2,270	870		427	4,150	427	316	131	138	5
29			2,270	695		380	2,600	336	246	119	116	6'
30	85 81	110	1,870 2,410	668		358	2,000	253		111	108	
		Mor			Ma	ximum	Minimu	ım	Mean	Per squar		-off in
						150	70		60.1	0.198		.23
						150	30			.970		.08
						590	77		295			
Dead	mber					,450	100		688	2.26		.61
						,530	472	2,	320	7.63		3.80
						,310	280		681	2.24		.33
					1 -	,180	180		491	1.62		. 87
MATC						790	358		659	5.46		.09

1,320

3,500

1,680

951

684

April.....

May....

June.....

July......

August.....

September.....

The year.....

5.46

2.41

.727 1.20

2.26

.461

1,659

581

732

221

366

140

686

253 144

111

81 59

2.20

2.69

1.38

30.63

.51

31.00

Tionesta Creek at Nebraska, Pa.

Location. - Staff gage, lat. 41°28'25", long. 79°23'05", 500 feet below highway

bridge at Nebraska, Forest County, a third of a mile below mouth of Coon Creek.

Zero of gage is 1,079.00 feet above mean sea level.

Drainage area. - 481 square miles.

Records available. - October 1931 to September 1937 in reports of U. S. Geological

Survey; October 1909 to September 1911 in report of Flood Commission of Pittsburgh, 1911; August 1923 to September 1937 in reports of Pennsylvania Department of Forests and Waters

ment of Forests and Waters.

Average discharge. - 12 years (1925-37), 856 second-feet.

Extremes. - Maximum discharge during year, 16,400 second-feet Jan. 25 (gage height, 9.87 feet, from floodmark); minimum, 39 second-feet Oct. 7 (gage height, 0.30 foot).

1909-11, 1923-37: Maximum discharge, 21,900 second-feet Mar. 4, 1934 (gage height, 11.4 feet, from graph based on gage readings), from rating curve extended above 15,500 second-feet; minimum, 25 second-feet Sept. 7-10, 25, 1927.

Remarks. - Records fair except those for period of ice effect, Nov. 26 to Dec. 27, which are poor and were determined from gage heights, weather records, and by comparison with records for stations in adjacent drainage areas. Discharge for high stages determined from graphs based on twice-daily gage readings.

Daily and monthly discharge, in second-feet, 1936-37

ay	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
-	57	153	200	3,160	1,440	535	592	3,430	535	480	206	221
1	60	163	210	2,350	1,090	563	592	2,240	453	453	187	202
2		460	240	2,240	905	480	592	1,820	427	401	166	202
3	57	1 100	300	1,820	740	480	563	1,440	453	351	153	327
5	48 46	1,190 2,350	400	1,440	835	835	621	2,070	351	303	143	507
8	41	1,440	560	1,090	710	740	1,170	2,590	303	351	164	453
7	44	1,090	1,200	1,120	621	650	1,260	2,020	351	280	1,450	303
8	46	905	1,100	2,730	650	621	1,010	1,720	303	217	820	242
9	48	770	800	2,470	1,600	621	1,440	1,440	258	191	453	
.0	93	680	700	2,350	1,840	453	1,440	1,260	501	202	1,260	18'
1	115	563	1,000	1,920	940	401	1,170	1,090	563 376	2,010	5,400 3,480	229 303
12	107	480	1,100	1,620	940	427	1,050	905		1,210		22
3	80	401	860	1,350	870	480	940	1,500	280		2,020	19
4	67	376	560	2,550	905	401	870	2,710	815	710	1,350 940	18
1.5	62	453	480	7,280	940	401	1,820	1,920	1,720	1,720		
	60	535	450	4,500	770	376	1,820	1,530	940	6,680	710	17
16	90	427	410	2,960	621	327	1,440	1,440	940	3,420	592	16
17	225	427	350	4,700	650	376	1,260	1,260	2,020	1,820	650	15
18	202	376	250	4,020	621	351	1,090	1,090	2,470	1,350	563	14
00	146	376	400	2,710	563	401	940	940	1,620	975	453	14
21	109	376	440	6,600	563	905	1,140	835	3,050	770	376	14
22	93	376	380	8,970	1,180	770	2,780	770	6,400	650	1,100	13
23	84	351	360	5,500	940	680	2,960	835	3,380	535	1,030	12
24	93	327	400	5,270	835	680	2,240	710	2,020	453	680	11
25	98	303	600	14,700	740	1,190	2,700	592	1,440	453	563	11
26	163	270	880	8,300	650	1,260	9,660	535	1,090	507 401	507 453	11
27	351	250	1,500	4,140	650	940	8,480	896	835	327	401	11
85	233	230	3,320	2,710	401	870	8,240	1,260	870	280	327	10
29	156	220	2,470	2,130		800	7,550	905	650	250	280	10
30	. 146 160	210	2,350 3,540	1,720		740 621	5,300	740 621	535	233	250	10
31	100						Window		Mean	Per squa		-off i
		Mo	nth			ximum	Minim	1111	10 mm	mile		nohes
						351	4		109 551	0.22	7	0.26
						2,350	15		897	1.86		2.14
						3,540	20		3,737	7.77		8.96
						4,700	1,09	_	865	1.80		1.87
						1,840	40 32		625	1.30		1.50
						1,260	56		2,424	5.04		5.62
						9,660	53		1,391	2.89		3.33
						3,430	25		1,198	2.49		2.78
					1	6,400	19		924	1.92		2.21
						6,680	19		875	1.82		2.10
Aug	tember					5,400 507	10		199	.41	4	.46
Jop						4,700		1	1,153	2.40		52.51

Oil Creek at Rouseville, Pa.

Location. - Chain gage, lat. 41°28'55", long. 79°41'40", at highway bridge 400 feet above mouth of Cherrytree Run, 1 mile above Rouseville, Venango County, and 12 miles above former gaging station. Zero of gage is 1,028.33 feet above mean sea level.

The year....

Drainage area. - 300 square miles.
Records available. - June 1932 to September 1937. Extremes. - Maximum discharge observed during year, 11,300 second-feet Jan. 25 (gage height, 9.85 feet); minimum, 32 second-feet Oct. 5, 6, (gage height, 1.90 feet).

1.90 feet).

1932-37: Maximum discharge, that of Jan. 25, 1937; minimum, 22 secondfeet July 29, Sept. 5, 7, 1934 (gage height, 1.76 feet).

Remarks.- Records fair. Discharge for period of ice effect, Nov. 28 to Dec. 5,

determined from gage heights, weather records, and by comparison with records
for stations in adjacent drainage areas. Discharge for high stages determined from graphs based on twice-daily gage readings. Records include discharge of Cherrytree Run. Some regulation at low stages from power operations upstream.

Daily and monthly discharge, in second-feet, 1936-37

1 2 3			1	I			1	1				
2	40	116	150	2,010	842	278	355	1,070	260	260	127	110
1	43	133	160	1,040	558	315	335	820	225	242	113	138
3	40	478	180	1,120	495	260	398	650	225	260	108	127
4	36	787	220	805	360	315	355	565	260	225	105	211
5	33	1,300	300	558	465	715	335	540	208	425	98	640
6	33	842	525	385	385	620	680	1,120	192	335	125	315
7	85	660	1,040	500	317	490	680	750	192	242	930	225
8	62	590	695	2,960	517	490	515	565	161	176	364	176
9	50	525	465	2,370	2,150	465	650	490	158	161	242	149
10	80	410	385	1,690	1,260	315	620	465	513	155	588	144
11	94	317	833	1,120	695	278	490	420	492	162	1,810	144
12	70	242	880	805	590	278	465	375	295	580	933	149
13	54	210	465	625	525	295	398	515	208	417	565	121
14	49	196	317	2,920	625	242	375	750	2,200	565	335	108
15	44	360	360	7,740	660	260	1,050	592	3,470	759	260	108
16	46	495	297	3,480	525	260	1,240	465	1,160	2,950	208	110
17	64	360	277	1,640	385	225	680	540	650	1,380	176	95
18	136	410	277	4,540	410	260	565	490	1,850	620	260	88
19	126	465	181	3,050	410	242	490	398	1,980	442	260	86
20	89	297	360	1,400	438	315	420	375	900	355	192	86
21	66	338	317	4,810	495	1,450	507	335	1,250	278	324	86
22	58	410	297	4,870	1,140	785	1,460	315	4,340	260	540	81 79
23	55	317	297	2,490	730	650	1,550	465 375	1,820 820	225 208	335 260	77
24 25	58 57	277 242	317 260	1,980 9,590	590 495	540 1,160	980 891	315	565	225	225	77
				4,220	385	785	8,130	278	442	335	192	77
26	298	242	584 1,760	1,590	385	565	6,910	540	375	242	192	73
27	310 168	210 185	2,620	1,120	260	465	3,410	785	592	192	161	67
85	126	170	1,300	920	200	420	2,860	465	375	161	144	67
29	108	160	1,360	805		398	1,450	355	295	155	132	68
30 31	118	100	2,670	768		355		295		149	113	
		Mor	nth		Ma	ximum	Minimu	am)	lean	Per squa	-	off in
Oct	ober					310	33	3	87.0	0.290		0.33
-						1,300	110		392	1.31		1.46
Dec	ember					670	150		650	2.17		2.50
Jar	uary					590	38		384	7.94		9.15
Fet	ruary				2	2,150	260		610	2.06		2.14
						1,450	223		467	1.56		4.86
					1 -	3,130	33		308	4.36 1.77		2.04
Mar					1	1,120	298		532 882	2.94		3.28
						4,340 2,950	15 14		424	1.41		1.63
Jui						450	14	-				
Jui Jui	y											
Jui Jui Au	rust					1,810	9:	8	333 136	1.11		.50

lation at low stages.

French Creek at Carters Corners, Pa.

Location. - Chain gage, lat. 41°57'20", long. 79°52'40", at highway bridge at Carters Corners, Erie County, 4 miles northwest of Union City and 5 miles above mouth of South Branch of French Creek. Zero of gage is 1,235.7 feet

above mean sea level.

Drainage area.- 208 square miles.

Records avaITable.- October 1919 to September 1920; October 1932 to September 1937 in reports of U. S. Geological Survey; May 1910 to September 1937 in reports of Pennsylvania Department of Forests and Waters.

Average discharge.- 21 years (1910-16, 1919-29, 1932-37), 410 second-feet.

Average discharge during year, 9,920 second-feet Apr. 26 (gage height, Extremes.- Maximum discharge during year, 9,920 second-feet Apr. 26 (gage height, 7,000 second-feet; minimum, 12 second-feet Oct. 6 (gage height, 0.60 foot); minimum daily discharge, 14 second-feet Oct. 2, 6.

1910-37: Maximum discharge, 11,700 second-feet (revised) Mar. 25, 1913, 1910-37: Maximum discharge, 11,700 second-feet; maximum gage height, about 15.2 feet Mar. 12, 1920 (affected by ice); minimum discharge not determined. 15.2 feet Mar. 12, 1920 (affected by ice); minimum discharge not determined. Remarks.- Records good except those for periods of ice effect, Nov. 27 to Dec. 8, Dec. 20-24, Feb. 28 to Mar. 3, and for days of questionable gage record, Feb. 8, 22, 25, which are fair and were determined from gage heights, weather records, and by comparison with records for stations downstream. Discharge for high stages determined from graphs based on twice-daily gage readings. Some regustages determined from graphs based on twice-daily gage readings. Some regu-

Daily and monthly discharge, in second-feet, 1936-37

Day	Oot.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
ay	000.						294	890	90	120	46	44
3	16	60	140	1,060	350	140		452	75	110	40	39
2	14	115	130	695	259	140	390	452		124	34	39
2			130	560	252	150	473	390	76		38	83
3	18	699	140	390	245	223	390	312	70	124		050
4	18	672	140	390	07.4	410	390	294	127	108	36	252
5	15	628	150	312	214	410	000					
						4-5	516	312	97	93	35	135
	14	605	170	183	211	431	210	ORG	90	75	74	59
6	12	452	240	368	208	350	560	276		69	56	63
7	19		450	1,380	270	538	350	239	68			55
8	18	390	3 000	1,300		390	294	208	59	60	50	30
9	18	350	1,060	1,370	1,670	259	273	276	85	56	76	40
10	22	294	890	1,240	1,300	200	2.0					
10							050	186	88	60	252	48
	19	217	1,000	740	620	214	252		06	55	252	4
11		250	840	740	390	214	226	200	85	30	208	39
12	22	158		416	431	178	197	189	78	51		3
13	24	127	560	410	401	163	228	350	93	56	170	39
14	26	137	494	2,760	560		1,600	331	140	122	92	3
	24	247	245	5,070	516	142	1,000	001				
15							- 040	050	163	186	66	3
	07	312	259	2,070	410	135	1,840	259	103	112	58	3
16	23		256	1,130	331	122	1,000	226	204	112		4
17	32	350	250		163	149	628	370	1,440	81	63	2
18	68	390	242	2,180	267	144	582	294	1.940	69	60	3
19	81	350	211	1,830			473	214	1,070	45	64	4
20	56	245	190	1,830 798	473	194	710	211	-,0.0			
ZU							500	140	7 040	55	93	3
		350	175	1,580	516	522	582	149	1,040 2,660	44	168	
21	37		165	2,060	670	628	890	163	2,660			
22	34	452		2,000	516	790	1,000	233	1,470	40	85	2
25	32	312	160	1,060	773	672	695	220	653	38	69	
24	30	249	160	1,310	331		484	214	261	34	60	3
	30	223	227	6,480	270	890	202	27.2	202			
25	1 30	220						304	175	69	55	2
		005	759	2,250	194	790	5,490	124	135	09	59	
26	39	205		1,000	168	370	6,080	133	186	68	59	
27	53	190	1,320	1,000	150	294	3,140	294	180	56	53	
28	60	175	2,180	650	190		3,190	220	146	50	46	
29	46	165	1,320	516		245	3 770	146	127	53	54	. 3
	50		790	370		230	1,370	120	10,	48	40	
50	30		840	431		252		104		20		
31	60		010								P.	n-011 1

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October November December January February March April May June July August September	81 699 2,180 6,480 1,670 890 6,080 890 2,660 186 252 252	14 60 130 183 150 122 197 104 59 34 34 21	32.8 309 513 1,387 427 334 1,129 267 433 75.2 82.3 49.8	0.158 1.49 2.47 6.67 2.05 1.61 5.43 1.28 2.08 .362 .396 .239	0.18 1.66 2.85 7.69 2.14 1.86 6.06 1.48 2.32 .42 .46 .27
The year	6,480	14	419	2.01	27.39

French Creek at Saegerstown, Pa.

Location. - Chain gage, lat. 41°42'50", long. 80°08'50", at highway bridge at Saegerstown, Crawford County, half a mile above mouth of Woodcock Creek. Zero of gage is 1,093.74 feet above mean sea level.

Drainage area. - 629 square miles.

Records available. - April to September 1921, October 1931 to September 1937 in reports of U. S. Geological Survey; April 1921 to September 1937 in reports of Pennsylvania Department of Forests and Waters.

Average discharge. - 16 years, 1,039 second-feet.

Extremes. - Maximum discharge during year, 14,300 second-feet Jan. 26 (gage height, 13.24 feet, from floodmark); minimum, 55 second-feet Oct. 2-5 (gage height, 2.34 feet).

1921-37: Maximum discharge, 20,800 second-feet (revised) Jan. 20, 1929 (gage height, 15.9 feet, from graph based on gage readings), from rating curve extended above 14,000 second-feet; minimum, 22 second-feet Oct. 18, 1934

curve extended above 14,000 second-feet; minimum, 22 second-feet Uct. 18, 1934 (gage height, 2.10 feet).

Maximum stage known, about 17.9 feet, from floodmark, Mar. 26, 1913 (discharge, 26,300 second-feet, from rating curve extended above 14,000 second-feet).

Remarks.— Records good except those for periods of ice effect, Nov. 27 to Dec. 7,

Dec. 21-25, Feb. 4-7, Feb. 27 to Mar. 3, which are fair and were determined from gage heights, weather records, and by comparison with records for the stations at Carters Corners and Utica. Discharge for high stages determined from graphs based on twice-daily gage readings. Regulation at low stages from power operations upstream.

ay	Oot.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
-	62	175	335	3,770	1,620	530	770	3,100	341	459	179	138
1	58	200	360	2,450	1,140	520	882	1,790	281	398	156	313
2	58	550	350	1,880	882	530	1,140	1,300	281	369	147	234
3	58	1,220	370	1,530	780	732	995	1,070	313	369	134	870
5	58	1,530	440	990	730	1,540	882	958	398	369	125	1,460
	62	1,530	600	744	700	1,620	958	1,070	341	398	176	808
6 7	77	1,220	950	958	680	1,380	1,300	1,070	286	313	748	490
8	93	990	1,850	4,470	1,330	1.300	1,070	845	254	259	770	341
9	93	990	1,450	5,190	4,030	1,300	920	732	218	228	428	270 234
10	99	812	1,060	4,520	4,360	920	958	659	291	249	1,120	
11	102	614	1,800	2,880	2,360	659	845	589	490	259	2,310	218 208
12	105	522	2,250	1.790	1,410	659	770	555	369	695	1,960	198
13	115	434	1,530	1,370	1,300	695	695	589	286	522	1,300	170
14	99	378	1,060	5,150	1.460	589	589	808	1,710	490	555	156
15	96	434	883	10,400	1,790	589	1,300	995	2,040	1,060	300	
	0.2	RRO	711	11,200	1,460	555	3,540	808	1,270	2,310	398	156
16	91	778 847	711	6,650	1,220	490	2,790	770	623	2,050	308	142
17	112	883	646	5,750	1,070	555	1,790	882	2,950	958	522	138
18	149 213	883	522	6,200	1,070	589	1.460	845	4,260	555	490	134
20	213	711	492	4,130	1,300	998	1,220	695	3,440	459	369	129
	1 77	770	480	4,780	1,510	2,310	1,070	555	6,610	369	341	125
21	171	778	470	6,810	2,110	2,220	2,140	555	7,020	308	882	116
22	134	990 883	480	5,330	1,960	2,040	2,990	589	5,750	264	522	108
25	124 121	711	500	3,600	1,380	1,880	2,220	659	3,090	254	369	108
24	108	614	580	10,400	1,070	2,310	1,540	555	1,460	239	286	108
		500	3 770	13,100	808	2,040	7,610	459	995	302	286	112
26	127	522	1,370	7,280	690	1,380		459	770	313	249	108
27	175	470	2,650	2,870	600	1,140		623	808	259	208	92
28	222	425	4,190 4,260	1,880	000	958	7,450	695	695	228	160	92
29	196	385 355	2,900	1,460		845	5,900	490	522	198	160	84
31	159 159	333	3,770	1,460		808		398		189	151	
		Moi	nth		Ma	ximum	Minim	am.	Mean	Per square		nohes
0 - 4	ober					222	58		120	0.19		0.22
Non	ember					1,530	175		728	1.16		1.29
Doc	ember					4,260	335		,291	2.05		2.36
Jar	uary				1	3,100	744	4	548	7.23		2.42
Tak	ruary					4,360	600		458	2.32		2.05
Mai	oh					2,310	490		,119	4.30		4.80
Apı	·il				1	3,500	589		703	1.34		1.54
May	/					3,100	398		844	2.55		2.84
Jur	16					7,020	218		605	.80		.93
Ju	v					2,310	189		506 538	.85		.99
Au	rust					2,310	125		262	.41		.47
Sej	tember					1,460	84	-	202			28.25
									1,309	2.08		

French Creek at Utica, Pa.

Location. - Water-stage recorder, lat. 41°26'15", long. 79°57'20", at highway bridge at Utica, Venango County, a third of a mile above Mill Creek. Zero of gage is 1,019.54 feet above mean sea level.

Drainage area. - 1,028 square miles.

Records available. - August 1932 to September 1937.

Extremes. - Maximum discharge during year, 16,800 second-feet Jan. 26 (gage height, 10.88 feet); minimum, 92 second-feet Oct. 5 (gage height, 1.29 feet).

1932-37: Maximum discharge, 19,200 second-feet (revised) Mar. 27, 1936 (gage height, 11.57 feet), from rating curve extended above 14,000 second-feet; minimum, 43 second-feet July 30, 1934 (gage height, 1.03 feet).

Maximum stage known, about 15.7 feet during flood of March 1913 (discharge, 35,600 second-feet, from rating curve extended above 14,000 second-feet).

Remarks. - Records good except those for periods of ice effect or recorder failure, which are fair. Discharge for periods of ice effect, Nov. 29 to Dec. 7, Dec. 20-24, determined from gage heights, weather records, and by comparison with records for stations upstream. Discharge for periods of recorder failure, Oct. 11-14, Dec. 27-29, Jan. 7, 8, 21-23, June 16 to July 3, July 5-8, Sept. 19-24, determined by comparison with records for stations mentioned above.

Daily and monthly discharge, in second-feet, 1936-37

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1 2 3	109 107 100	284 312 539	470 500 500	5,610 4,890 3,630	2,870 2,280 1,730	1,010	1,250 1,250 1,360	7,300 4,380 2,950	638 544 512	850 890 910	261 243 222	251 229 368
4 5	94 92	1,490 2,400	520 650	2,800	1,590	1,060 2,160	1,450	2,160 1,830	512 528	868 1,200	209 199	768 3,740
6 7 8 9	94 113 137 137 184	2,530 2,160 1,830 1,590 1,400	870 1,500 2,160 2,100 1,830	1,540 1,770 4,590 6,770 7,170	1,320 1,240 1,460 4,460 5,610	2,400 2,160 1,990	1,270 1,500 1,540 1,400 1,360	1,990 1,830 1,540 1,320 1,170	550 533 449 405 784	820 760 620 555 490	215 602 1,080 782 840	2,300 1,360 898 662 555
11 12 13 14 15	180 175 185 170 161	1,180 974 818 708 789	2,270 2,940 2,660 1,990 1,540	5,800 3,960 2,730 5,060 11,700	4,740 2,780 2,040 1,990 2,280	1,250 1,140 1,100 990	1,270 1,140 1,060 959 1,310	1,050 951 966 1,160 1,400	913 782 595 2,930 4,660	459 503 937 825 986	2,990 3,020 2,250 1,590 1,070	490 464 425 391 346
16 17 16 19 20	152 190 284 304 325	1,050 1,320 1,400 1,450 1,360	1,320 1,170 1,110 854 760	14,200 13,000 10,700 9,400 8,420	2,160 1,830 1,590 1,540 1,730	868 890 928	3,230 3,950 2,770 1,990 1,680	1,320 1,200 1,180 1,240 1,090	3,000 2,000 3,500 5,400 5,800	3,650 3,550 2,220 1,260 883	796 626 899 890 638	317 284 261 240 228
21 22 23 24 25	317 273 229 212 193	1,320 1,400 1,450 1,230 1,020	750 740 760 800 943	6,770 8,920 9,900 8,150 14,400	2,040 2,730 3,020 2,400 1,830	3,390 3,090 2,800	1,500 2,310 3,950 3,710 2,890	920 818 890 990 928	5,800 13,000 11,000 6,200 3,500	694 584 490 425 401	781 933 1,110 727 544	210 200 190 180 170
26 27 28 29 30	317 454 401 373 338 296	906 762 675 570 500	1,550 3,460 5,610 6,180 5,140 5,100	16,400 14,600 9,280 5,040 3,550 2,940	1,450 1,250 1,140	2,400	8,190 12,700 16,000 13,900 10,200	832 920 1,130 1,110 920 741	2,500 2,000 1,900 1,500 1,000	464 480 439 368 321 284	454 536 410 350 308 277	17: 16: 15: 15: 14:
		Mon	th			Maximum	Minim	230	Mean	Per squ mile		n-off in
Nov Dec Jan Feb Mar Apr May Jun Jul Aug	ember ember uary ruary ch il y					454 2,530 6,180 16,400 5,610 3,390 16,000 7,300 13,000 3,650 3,020 3,740	92 284 470 1,540 1,140 868 959 741 405 284 199	1 1 7 2 1 3 1 2	216 181 895 284 236 768 612 556 778 909 834 545	0.210 1.15 1.84 7.09 2.18 1.72 3.51 1.51 2.70 .884 .811		0.24 1.28 2.12 8.17 2.27 1.98 3.92 1.74 3.01 1.02 .94
						16,400	92	2	,067	2.01		27.28

Cussewago Creek near Meadville, Pa.

Location. - Chain gage, lat. 41°40'20", long. 80°12'55", at highway bridge 4 miles northwest of Meadville, Crawford County. Zero of gage is 1,071.77 feet above mean sea level.

Drainage area. - 90.2 square miles.

Records available. - October 1918 to September 1920, October 1931 to September 1937

in reports of U. S. Geological Survey; May 1910 to September 1937 in reports

of Pennsylvania Department of Forests and Waters.

Average discharge. - 27 years, 128 second-feet.

Extremes. - Maximum discharge during year, 4,200 second-feet Jan. 25 (gage height,

13.0 feet, from graph based on gage readings), from rating curve extended above

1,000 second-feet; minimum, 0.8 second-foot Sept. 2; minimum daily discharge,

1.4 second-foot Sept. 1. 1.4 second-foot Sept. 1.

1910-37: Maximum gage height (estimated), 16.0 feet Mar. 25, 1913 (discharge not determined; probably backwater from French Creek); no flow

July 23, Sept. 7, 1936.

Remarks. - Records fair. Discharge for periods of ice effect, Nov. 27 to Dec. 7, Dec. 21-25, Feb. 3-7, determined from gage heights, weather records, and by comparison with records for stations in adjacent drainage areas. Discharge for high stages determined from graphs based on twice-daily gage readings. Slight regulation at low stages from power operations upstream.

Day	Oot.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
-	7.3	15	33	424	145	62	66	306	15	23	6.6	1.4
1	3.1		32	424	107	51	66	123	14	20	4.6	3.3
2	2.2	17	32	306	90	45	74	78	15	32	4.0	58
3	2.0	56	32	286	70	73	62	62	16	32	3.4	191
4 6	1.8	122 189	34 40	127	55	212	50	62	16	34	2.9	398
			60	109	50	327	54	70	15	30	3.4	327
6	1.8	258	60	102 88	50	306	58	66	16	17	11	153
7	3.4	233	130	379	86	210	54	51	14	14	15	47
8	2.3	182	241	0/9		151	51	44	11	11	12	24
9	3.8 4.2	122 92	258 151	763 763	340 1 551	102	54	40	34	9.8	12 22	17
10		32										16
11	2.5	70	196	622	551	70	51	36	38	9.0	49	17
12	2.5	50	316	446	244	74	46	32	28	10	87	
13	3.8	39	361	190	112	58	40	34	18	23 27	45	15
14	4.9	32	189	424	117	54	34	58	370	27	36	14
15	4.9	51	81	2,210	157	51	54	70	561	43	20	12
16	4.0	97	62	1,130 700	139	48	162	62	672	190	14	9.8
17	6.2	107	66	700	117	48	189	54	456	306	9.6	8.6
18	16	122	70	622	92	58	110	51	382	208	12	7.4
19	20	157	58	872	87	70	66	46	834	81	11	6.0
20	24	127	44	700	127	119	54	39	901	49	11	5.8
	18	102	41	622	203	299	50	32	877	32	8.6	4.6
21	14	133	39	994	258	438	148	26	2,770	20	14	4.
22	14	122	37	800	338	466	328	54	2,770	16	20	4.0
23	11	78	38	580	236	305	398	58	694	14	14	3.
24	9.8		43	2,640	117	225	256	42	433	13	9.2	3.4
25	8.8	54	20	2,040								
28	16	46	149	1,150	97	296	915	30 42	139 54	24 26	6.9 5.5	3.
27	21	42	316	646	78	210	1,920	42	45	17	4.6	3.4
28	30	38	438	457	70	122	925	42		14	3.8	3.
29	26	36	480	183		97	672	28	40		3.1	2.
30	18	34	495	117		92	526	20	32	7.8	2.2	2.
31	16		438	122		82		16		7.8	2.2	

Month	Maximum	Minimum	Mean	Per square mile	Run-off in
October	30	1.7	9.80	0.109	0.13
	258	15	94.1	1.04	1.16
November	495	32	160	1.77	2.04
December	2,640	88	642	7.12	8.21
January	551	50	167	1.85	1.93
February	466	45	156	1.73	1.99
March		34	251	2.78	3.10
April	1,920	16	57.2	.634	.73
May	306	10	360	3.99	4.45
June	2,770	11		.488	.56
July	306	7.8	44.0	.169	.19
August	87	2.2	15.2		.56
September	398	1.4	45.6	.506	.00
The year	2,640	1.4	167	1.85	25.05

Sugar Creek at Sugarcreek, Pa.

Location. - Chain gage, lat. 41°25'45", long. 79°52'45", at highway bridge three-quarters of a mile north of Sugarcreek, Venango County, three-quarters of a mile above mouth, and 3 miles northwest of Franklin. Zero of gage is 1,016.03 feet above mean sea level.

Drainage area. - 166 square miles.

Records available. - August 1932 to September 1937.

Extremes. - Maximum discharge during year, 8,690 second-feet Jan. 25 (gage height, 8.5 feet, from graph based on gage readings); minimum, 23 second-feet Oct. 4. 1932-37: Maximum discharge, that of Jan. 25, 1937; minimum, 9.2 second-feet Oct. 22, 1935; minimum daily discharge, 10 second-feet Oct. 14, 1934.

Remarks. - Records fair. Discharge for period of ice effect, Nov. 27 to Dec. 6, determined from gage heights, weather records, and by comparison with records for stations in adjacent drainage areas. Discharge for high stages determined from graphs based on twice-daily gage readings. Some regulation at low stages from operation of mills upstream.

Daily and monthly discharge, in second-feet, 1936-37

ay	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July A	ng.	Sept.
			05	723	602	311	219	692	115	157	72	64
1	32	86	85 85	632	443	177	256	468	88	161	68	62
2	33	98	87	602	396	183	216	374	105	180	64	61
5	28	248	87		311	189	189	352	101	276	63	75
4 5	24	520 723	89 95	396 332	273	489	194	332	85	343	64	248
		546	140	252	259	420	352	396	80	261	73	184
6	25	443	370	334	273	374	292	443	107	308	212	150
7	34	311	197	1,820	488	332	245	311	75	164	126	122
8	32	273	238	1,210		256	374	292	78	138	115	98
0	26 85	245	252	853	755	222	311	256	348	122	205	89
	66	183	493	632	574	248	273	219	263	119	168	79
1	46	154	420	493	352	169	228	194	164	168	168	77
2	42	137	273	443	311	156	203	270	149	161	164	66
3	40	126	209	2,090	443	151	197	352	2,720	119	132	64
4	38	189	209 192	4,130	420	146	558	292	1,690	214	112	64
	38	156	174	1,400	332	149	583	292	792	1,850	98	62
6	75	177	164	976	332	137	332	252	538	460	84	56
7	98	232	149	2,440	252	156	292	222	922	331	168	56 60
18	83	146	94	1,130	242	151	248	192	731	218	113	60
.9	72	156	135	990	225	242	209	172	513	180	92	53
	66	206	154	3,290	332	906	373	149	1,220	146	112	50
21	59	169	140	3,030	493	602	1,100	140	1,940	112	261	50
22	58	154	140	1,520	420	443	887	222	922	117	155	4'
23	64	149	135	1,710	352	374	632	159	639	105	119	49
4	59	146	142	6,030	311	818	810	135	444	95	121	5:
	250	118	159	2,540	256	602	5,380 3,130	128	362	168	102	4:
95	200	110	622	1,130	228	493	3,130	235	276	112	95	4
27		100	820	853	248	420	2,010	420	232	98	85	4
85	146	90	493	723	2.0	311	1,290	219	205	84	77	4
95	120	87		602		273	820	164	168	78	70	4
50 51	103 64		1,150			248		149		73	63	
		Мо	nth		M	arisus	Minimu		Mean	Per square mile		n-off in
0-4						250	24		68.7	0.414		.48
						723	86		216	1.30		L.45
						1,150	85		271	1.63		1.88
						6,030	252	1,	419	8.55		. 86
J AL	usry					1,270	225		400	2.41		2.51
V-	ruary					906	137		327	1.97		2.27
A-I						5,380	189		740	4.46		1.98
API						692	128	1	274	1.65		1.90
Maj						2,720	75		536	3.23		3.60
Jur	16					1,850	73		230	1.39		1.60
JAI	y					261	63		117	.705		.81
Ser	otember					248	47		76.2	.459	_	:51
							1			2.34		1.85

Clarion River near Piney, Pa.

Location. - At hydroelectric plant of the Clarion River Power Co., lat. 41°11'30", long. 79°26'0", 2½ miles upstream from Piney, Clarion County, and 3 miles southwest of Clarion.

Drainage area. - 951 square miles.

Records available. - October 1933 to September 1937 in reports of U. S. Geological Survey; October 1924 to September 1937 in reports of Pennsylvania Department of Forests and Waters.

Average discharge. - 13 years, 1,560 second-feet.

Remarks. - Discharge computed from power-house records. Part of monthly table corrected for storage. Records furnished by the Clarion River Power Co.

Daily and monthly discharge, in second-feet, 1936-37

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	63	63	248	6,970	3,050	765	1,290	6,370	1,230	721	63	275
2	91	774	307	5,530	2,350	1,520	1,710	4,910	882	1,550	398	248
3	172	1,180	336	5,520	1,920	1,020	1,600	3,830	816	1,110	297	465
4	63	3,650	709	4,800	1,450	893	328	3,090	921	60	348	410
6	63	7,070	449	3,860	996	1,980	1,530	3,110	882	63	231	573
6	178	5,490	404	2,960	2,240	2,570	1,740	4,550	495	347	398	221
7	63	4,380	2,340	2,910	410	62	2,060	3,670	558	415	1,270	40
8	63	2,960	2,020	3,740	1,880	1,680	2,140	2,850	483	316	230	30
9	78	2,620	1,410	3,630	1,900	1,330	2,790	2,240	565	583	309	344
10	492	2,360	1,760	3,700	2,400	1,240	3,750	2,690	847	558	1,240	41:
11	63	880	2,910	3,440	2,030	1,020	585	2,030	648	1,330	1,580	26
12	106	1,260	3,180	3,820	1,430	1,030	2,370	1,730	1,090	4,280	2,550	63
13	362	1,610	1,600	3,020	2,670	1,750	1,880	2,930	63	3,020	1,730	198
14	65	1,600	2,300	4,180	347	340	1,880	5,690	1,870	1,570	921	24
16	63	298	1,930	12,600	1,550	975	2,890	4,160	2,240	3,090	63	160
16	137	907	1,740	9,460	1,520	926	3,180	3,040	1,970	4,880	317	180
17	1,040	954	1,570	6,440	1,350	655	2,680	3,280	974	5,630	428	32
18	76	950	2,010	7,940	1,360	1,460	1,290	3,220	2,230	3,210	515	6
19	370	816	1,840	7,700	1,210	1,140	2,130	2,430	2,300	2,440	640	6
20	927	1,350	2,750	6,010	1,220	494	1,850	2,090	1,260	1,690	1,010	9
21	416	643	3,420	9,980	229	1,700	2,520	2,440	2,560	1,260	470	22
22	291	63	2,810	18,200	1,840	2,000	4,760	2,080	5,730	1,320	313	17
23	286	976	2.640	13,700	1,760	1,500	6,150	1,120	4,170	1,840	677	63
24	331	680	2.810	9,740	1,200	1,450	5,750	2,400	3,150	912	620	28'
25	63	698	1,440	21,000	1,240	2,300	5,420	1,390	2,800	205	677	63
26	579	211	3,080	13,900	1,050	2,690	13,500	1,430	2,120	687	512	63
27	733	818	1,790	8,320	1,500	2,460	14,600	1,940	63	789	987	51:
28	819	621	5,430	6,020	944	1,240	14,600	2,890	1,090	703	63	39'
29	428	62	5,310	4,170		1,680	13,000	3,080	1,050	428	64	403
30	656	421	5,070	3,940	1	1,570	7,970	386	842	373	297	593
31	491		7,160	2,920		1,240		74		771	316	
				Observe	d		Storage		Correct	ted for s	torage	
	Month						(Maam)			Per squa	re Run	-off i

31 401	1,100			Storage	Corre	oted for stor	Age
		Observed		S COL AGO	0022	70000 101 0001	-6*
Month	Maximum	Minimum	Mean	(Mean)	Mean	Per square mile	Run-off in inches
Ostober	1,040	63	311	-7	304	0.320	0.37
November	7,070	62	1,546	-1	1,545	1.62	1.81
December	7,160	248	2,348	+10	2,358	2.48	2.86
January	21,000	2,910	7,101	-15	7,086	7.45	8.59
February	3,050	229	1,537	+11	1,548	1.63	1.70
March	2,690	62	1,377	6	1,371	1.44	1.66
	14,600	328	4,265	+19	4,284	4.50	5.02
April	6,370	74	2,811	-14	2,797	2.94	3.39
June	5,730	63	1,530	+5	1,535	1.61	1.80
	5,630	60	1,489	-5	1,484	1.56	1.80
July	2,550	63	630	+10	640	.673	.78
August September	591	63	270	+1	271	.285	.32
The year	21,000	60	2,108	+1	2,109	2.22	30.10

Redbank Creek at St. Charles, Pa.

Location. - Chain gage, lat. 40°59'40", long. 79°23'30", at industrial railroad bridge at St. Charles, Clarion County, a quarter of a mile below mouth of Leatherwood Creek. Zero of gage is 976.24 feet above mean sea level.

Leatherwood Creek. Zero of gage is 976.24 feet above mean sea level.

Brainage area. - 528 square miles.

Records available. - October 1918 to September 1921, October 1931 to September 1937

In reports of U. S. Geological Survey; October 1909 to September 1937 in reports of Pennsylvania Department of Forests and Waters.

Average discharge. - 24 years (1910-14, 1915-16, 1918-37), 891 second-feet.

Extremes. - Maximum discharge during year, 18,000 second-feet Jan. 25 (gage height, 11.7 feet, from graph based on gage readings), from rating curve extended on basis of slope-area determination; minimum, 57 second-feet Sept. 30 (gage height 0.34 foot)

height, 0.34 foot).

1909-37: Maximum discharge, 35,200 second-feet Mar. 18, 1936 (gage height, 18.60 feet, from floodmarks), from rating curve extended on basis of slope-area determination; minimum, 10 second-feet Aug. 9, 1910.

Remarks.- Records fair. Discharge for period of ice effect, Nov. 27 to Dec. 6, determined from gage heights, weather records, and by comparison with records for stations in additional drainage areas. Discharge for high stages determined from stations in adjacent drainage areas. Discharge for high stages determined from graphs based on twice-daily gage readings. Some regulation at low stages from power operations upstream.

Daily and monthly discharge, in second-feet, 1936-37

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	113	286	105	5,080	1,340	490	648	2,440	515	358	161	119
2	132	302	105	2,730	1,120	592	565	1,780	420		153	110
3	117	396	110	2,590	920	592	515	1,420	399		145	108
4	99	2,570	120	2,450	620	540	490	1,190	378		100	98
5	76	7,440	140	1,820	648	920	515	1,260	339		110	266
6	62	4,670	170	1,390	592	1,120	648	2,050	321	240	123	378
7	60 65	2,870	1,900	1,200	540	920	705	1,780	286		126	270
8	97	1,940	1,710	2,460	756	855	675	1,340	240		145	201
10	573	1,290 950	1,290	2,450	1,500	765 5 4 0	675 1,050	1,120	240 286		265 310	155 136
11	580	720	1,720	2,450	855	540						
12	530	606	2,730	1,940	765	515	855 795	855 765	378		456	138
13	304	530	1,820	1,600	855	540	705	1,280	303	1,500	490	134
14	212	483	1,390	3,920	795	442	705		213		321	121
15	162	438	1,200	7,700	765	442	985	3,510 2,440	1,280 2,960	636 1,360	240	105
16	140	417	880	4,500	675	378	1,190	1,780	1,650		153	
17	240	356	950	3,320	490	358	985	1,500	1,190	2,320	149	100 92 86
18	832	356	880	6,300	565	399	855	1,260	1,780	1,420	213	86
19	950	319	720	5,020	592	378	765	1,050	1,780	1,050	189	86
02	555	286	2,040	3,640	465	511	705	855	1,500	765	213	86 86
21	396 286	302	2,450	10,400	490	1,690	922	765	1,790	592	260	80
22 23	255	255	1,940	14,300	1,160	1,650	3,320	705	4,240	465	751	80 80
24	255	255	1,290	10,100	1,120	1,260	3,890	735	2,720	358	565	75
25	255	240	1,110	7,060	985	985	2,560	648	1,500	321	399	75 70
			1,110	15,400	855	1,190	3,730	565	1,120	603	303	65
26	586	199	1,290	9,000	765	1,590	14,700	442	920	420	286	65
27	950	160	1,950	4,520	648	1,260	9,650	608	735	378	240	65 63
28	662	125	3,890	2,690	465	1,050	9,430	1,190	620	286	213	65
29	417	115	3,170	1,780		920	7,480	1,120	515	226	189	65 60 58
30	376	110	2,590	1,500		765	3,890	795	420	201	155	58
31	319		4,900	1,340		705		565		178	143	
		Mont	th		Max	Kimum	Minimum	M	ean	Per square		off in
Octo	ber					950	60		344	0.652	0.	75
MOVE	mber	• • • • • • • • •	• • • • • • • •		. 7	,440	110		973	1.84	2.	
Tege	mber	• • • • • • • • •				,900	105	1	512	2.86	3.	
J and	ary	• • • • • • • • •	• • • • • • • •			,400	1,200		616	8.74	10.	
Vone	uary					,500	465		813	1.54	1.	
Anni	1	• • • • • • • • •	• • • • • • • •			,690	358		803	1.52	1.	
APTI.	L	• • • • • • • • •	• • • • • • • •			700	490	2	487	4.71	5.	
Inno			• • • • • • • •			,510	442		252	2.37	2.	
Inla						,240	213		035	1.96	2.	
Ancer	•	• • • • • • • •			. 2	320	157		642	1.22	1.	_
Sent			• • • • • • • •			751	100		250	.473		55
o a pt(э д 06Г	• • • • • • • •				378	58		119	.225		25
	The year	r			. 15,	400	58	1.	242	2.35	31.	22

Mahoning Creek near Dayton, Pa.

Location. - Chain gage, lat. 40°54'05", long. 79°13'35", at Independence Bridge, three-quarters of a mile above mouth of Foundry Run and 1 3/4 miles northeast of Dayton, Armstrong County. Zero of gage is 1,095.24 feet above mean sea level.

Drainage area. - 321 square miles.

Records available. - October 1920 to September 1921, October 1931 to September 1937
in reports of U.S. Geological Survey; August 1916 to September 1937 in reports
of Pennsylvania Department of Forests and Waters.

Average discharge. - 17 years (1920-37), 565 second-feet.

Extremes. - Maximum discharge during year, 8,370 second-feet Apr. 26 (gage height,
8.3 feet, from graph based on gage readings); minimum, 45 second-feet Sept.
25-30 (gage height, 1.76 feet).

1916-37: Maximum discharge observed, 22,800 second-feet Mar. 18, 1936
(gage height, 14.53 feet), from rating curve extended on basis of slope-area determination; minimum, 8.0 second-feet Oct. 17, 1928 (gage height, 1.40 feet).

Remarks. - Records good except those for period of ice effect, Nov. 27 to Dec. 4,
which are fair and were determined from gage heights, weather records, and by comparison with records for stations in adjacent drainage areas. Discharge for high stages determined from graphs based on twice-daily gage readings. for high stages determined from graphs based on twice-daily gage readings. Slight regulation at low stages from power operations upstream.

Daily and monthly discharge, in second-feet, 1936-37

ay	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
					1 000	400	433	1,520	204	192	110	95
1	238	262	150	1,950	1,200	402	433	1,200	185	185	95	84
2	194	270	155	1,950	670	373	373	920	173	222	84	87
3	170	385	165	2,080	530	373		710	213	218	74	125
4	147	2,210	180	1,690	497	344	344	635	185	181	67	152
5	116	5,610	223	1,400	497	635	344	030	100			
	71	2,770	402	1,230	464	875	402	920	166	125	69 79	204 122
6	67	2,080	1,950	1,280	402	830	433	830	218	113	92	95
7	76	1,120	1,020	1,400	464	565	433	635	181	90	135	76
8	133	830	790	1,340	1,150	565	497	565	152	113		65
9	712	635	600	1,450	1,010	530	635	530	155	90	189	0.
			cmo	1,690	670	464	497	433	152	127	464	74
1	2,080	500	679	1,090	600	433	464	402	135	550	235	71
2	790	470	1,690	1,340	600	402	433	505	727	228	162	6'
13	500	410	1,230	1,280		344	402	1,650	1,250	142	122	63
4	440	336	875	1,450	530	318	1,120	1,460	1,250	195	87	59
5	336	336	710	2,210	433	310	1,120	, 100				-
			CZE	3,060	373	282	1.060	920	600	629	76	5
16	238	312	635	2,770	344	263	830	790	433	1,550	79	5
17	620	291	530	7 060	344	258	710	600	402	790	90	5
18	1,950	266	470	3,060	373	254	600	565	402	530	87	5
19	1,280	242	385	3,060		830	497	497	344	344	67	5
05	635	262	1,660	2,490	344	000	101				07	5
	440	262	1,450	5,100	373	2,790	530	402	492	278	63 135	4
21		238	1,070	7,030	464	1,410	2,010	373	2,040	402	213	4
22	385	230	830	4,930	750	1,150	2,250	373	1,060	258		4
23	336		710	3,210	750	830	1,630	344	710	268	142	4
24	312 312	216 194	710	6,490	600	920	1,590	287	565	670	95	7
25	010				404	1 010	6,920	268	433	402	186	4
26	360	198	830	4,380	464	1,010	5 270	282	373	318	635	4
27	385	180	1,280	2,380	497	790	5,270	497	344	235	373	4
28	360	170	2,910	1,630	433	710	5,100	344	268	185	218	4
29	336	160	1,570	1,300		600	3,520	263	226	155	148	4
30	312	155	1.340	1,060		530 464	2,250	218	220	128	116	
31	270		1,690	1,100						Per squa	re Ru	a-off i
		Mo	nth		M	aximum	Minim	am .	Mean	mile	1	nohes
						2,080	67	,	471	1.47		1.70
001	tober				• • • ;	5,610	155		720	2.24		2.50
Not	vember				• • • •	2,910	150		932	2.90		3.34
Dec	oember					7,030	1,060		477	7.72		8.90
Jan	nuary					1,200	344		565	1.76		1.83
Fel	bruary				• • •	2,790	25		663	2.07		2.39
Max	roh					6,920	34		400	4.36		4.86
Ap:	ril					1,650	21	_	643	2.00		2.31
Ma	v					2 040	13		468	1.46		1.63
Ju	ne					2,040	9	1	320	1.00		1.15
Ju	ly					1,550	6		154	.48		.55
An	gust			,		635 204	4		72.6	.22		.25
Se	ptember.					204			743	2.31		31.41
						7,030	4					

Crooked Creek near Ford City, Pa.

ALLEGHENY RIVER BASIN

Location. - Chain gage, lat. 40°43'00", long. 79°31'50", at highway bridge 3 miles south of Ford City, Armstrong County, and 5 miles above mouth. Zero of gage is 786.12 feet above mean sea level.

Drainage area. - 280 square miles.

Records available. - October 1918 to September 1921, October 1931 to September 1937
In reports of U. S. Geological Survey; October 1909 to September 1937 in reports

in reports of U. S. Geological Survey; October 1909 to September 1937 in reports of Pennsylvania Department of Forests and Waters.

Average discharge. - 26 years (1910-13, 1914-37), 441 second-feet.

Extremes. - Maximum discharge during year, 11,400 second-feet Apr. 26 (gage height, 13.2 feet, from graph based on gage readings), from rating curve extended on basis of contracted-opening determination; minimum, 6.0 second-feet Sept. 28 (gage height, 0.90 foot).

1909-37: Maximum discharge, 21,000 second-feet Mar. 18, 1936 (gage height, 17.86 feet, from floodmark), from rating curve extended on basis of contracted-opening determination; minimum observed, 0.1 second-foot Sept. 11, 25, 26, 1932.

Remarks. - Records poor. Discharge for period of questionable gage record, Nov. 7-10, determined by comparison with records for stations in adjacent drainage areas. Discharge for periods of ice effect, Nov. 27 to Dec. 5, Feb. 28 to Mar. 4, Mar. 10-13, determined from gage heights, weather records, and by comparison with records for stations mentioned above. Discharge for high stages determined from graphs based on twice-daily gage readings. Slight regulation at low stages from power operations upstream. stages from power operations upstream.

Daily and monthly discharge, in second-feet. 1936-37

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	680	79	50	1,360	625	210	218	670	147	68	32	53
2	400	183	53	1,040	420	205	205	500	120	55	30	39
3	239	400	60	1,160	334	200	181	402	102	76	24	31
4	147	1,600	70	1,160	244	230	158	317	98	114	24	52
5	77	5,240	86	925	286	286	147	302	90	342	22	158
6	34	2,120	114	570	257	272	136	440	72	193	23	257
7	53	875	1,930	550	331	230	170	350	76	105	21	128
8	73	510	1,220	775	860	218	147	272	103	75	26	81
9	83	330	725	635	860	205	181	230	62	60	22	48
10	3,370	365	470	1,100	810	170	218	218	68	68	94	43
11	2,770	314	635	875	670	150	193	181	76	44	304	42
12	1,120	282	680	1,100	520	150	170	158	64	147	124	44
13	570	189	680	590	420	160	158	209	48	120	68	43
14	400	178	550	1,110	420	136	206	460	68	136	47	31
15	267	178	435	3,370	368	116	1,760	368	193	181	25	27
16	361	178	365	2,180	350	126	1,420	302	136	294	19	27
17	1,110	157	348	1,280	272	112	810	286	87	1,910	17.	22
18	2,500	147	297	3,680	205	147	602	257	82	1,360	26	17
19	1,010	117	250	2,830	230	170	480	230	75	580	27	20
20	635	123	1,750	2,020	244	592	368	193	66	350	36	17
21	418	114	1,320	4,340	269	2,180	420	170	188	257	67	17
22	330	117	930	7,610	705	1,650	1,990	158	4,080	170	210	16
23	282	107	590	4,570	520	960	1,910	170	537	230	276	11
24	226	95	530	2,920	420	625	1,190	147	302	181	244	13
25	249	95	510	6,120	368	625	1,630	116	193	102	181	14
85	590	83	550	3,060	226	560	9,120	107	147	128	98	13
27	272	74	1,150	1,420	231	402	4,780	170	111	105	218	9.
85	157	66	2,230	860	220	334	2,310	414	93	74	205	6.5
29	107	60	1,390	670		244	1,510	405	84	49	132	9.5
30	90	55	985	560		272	960	244	72	43	92	8.0
31	73		1,410	500		244		193		26	68	

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	3,370	34	603	2.15	2.48
November	5,240	55	481	1.72	1.92
December	2,230	50	721	2.58	2.97
January	7,610	500	1,966	7.02	8.09
February	860	205	417	1.49	1.55
March	2,180	112	393	1.40	1.61
April	9,120	136	1,125	4.02	4.48
May	670	107	279	1.00	1.15
June	4,080	48	255	.911	1.02
July	1,910	26	247	.392	1.02
August	304	17	90.4	.323	.37
September	257	6.5	43.3	.155	.17
The year	9.120	6.5	554	1.98	26.83

Kiskiminetas River at Avonmore, Pa.

Location. - Wire-weight gage, lat. 40°32'05", long. 79°27'55", at highway bridge at Avonmore, Westmoreland County, 1 mile above mouth of Long Run. Zero of gage is 805.64 feet above mean sea level.

Drainage area. - 1,723 square miles.

Records available. - June 1907 to September 1913, October 1918 to September 1921,

October 1931 to July 1937 in reports of U. S. Geological Survey; May 1907 to July 1937 in reports of Pennsylvania Department of Forests and Waters

(discontinued).

Average discharge. - 29 years (1907-36), 2,999 second-feet.

Extremes. - Maximum discharge during period, 80,400 second-feet Apr. 26 (gage height, 28.8 feet, from graph based on gage readings), from rating curve extended on basis of slope-area determination; minimum not determined.

1907-37: Maximum discharge, 200,000 second-feet Mar. 18, 1936 (gage height, 47.2 feet, from floodmarks), from rating curve extended on basis of slope-area determination; minimum observed, 60 second-feet Sept. 18-27,

1908 (gage height, 1.6 feet).
Remarks. - Records poor. Discharge for period of ice effect, Nov. 29 to Dec. 4, determined from gage heights, weather records, and by comparison with records for stations on tributaries upstream. Discharge for high stages determined from graphs based on twice-daily gage readings. Slight regulation at low stages from power operations upstream.

Day	Oot.	Nov.	Deo.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept
1	5,190	1,750	740	7,750	6,250	2,720	2,950	7,540	2,190	1,000		
2	4,420	1,880	660	7,030	5,260	2,720	2,830	5,850	1,900	930		
3	2,840	3,480	780	8,760	4,360	2,720	2,610	4,930	2,190	1,000		
4	2,400	7,610	930	7,630	3,560	2,840	2,500	4,220	2,090	1,140		
5	1,500	30,800	1,100	5,760	3,560	5,700	2,390	3,950	1,810	1,810		
6	1,250	14,400	1,360	4,540	3,070	5,860	2,390	7,940	1,540	1,460		
7	1,400	8,390	10,100	5,260	3,190	4,640	2,950	7,500	1,460	1,300		
8	1,650	6,020	7,620	10,200	3,400	4,080	2,610	5,530	1,460	1,070		
9	1,960	4,800	4,610	10,000	6,580	3,950	3,000	5,080	1,380	1,000		
10	6,280	3,920	3,680	12,000	8,240	3,560	4,780	4,360	1,300	1,220		
11	6,100	3,200	3,550	22,400	5,860	2,950	3,950	3,820	1,300	1,380		
12	3,600	2,730	7,130	12,900	4,930	2,830	3,560	3,310	1,300	2,290		
13	2,620	2,510	5,880	8,620	4,360	2,720	3,430	3,570	1,220	1,630		
14	2,070	2,290	4,410	6,950	4,080	2,610	3,310	6,760	1,300	1,990		
15	1,650	2,070	3,920	9,260	3,950	2,720	11,100	5,380	1,460	4,220		
16	1,450	2,180	3,200	8,670	3,560	2,390	13,500	4,640	1,460	4,080		
17	4,020	1,960	3,200	6,670	3,190	2,290	8,650	4,500	1,220	10,600		
18	13,200	1,650	3,440	16,300	2,720	2,390	6,170	4,640	1,220	12,800		
19	7,720	1,650	2,960	17,200	2,830	2,500	5,230	4,080	1,380	5,230		
20	5,060	1,500	7,150	11,400	2,830	3,620	4,360	3,820	1,380			
21	3,680	1,450	7,570	16,700	2,950	16,000	3,820	3,310	1,380			
22	2,960	1,450	5,560	35,200	4,650	13,000	8,980	2,950	3,470			-
23	2,510	1,300	4,160	30,600	5,690	8,270	11,000	2,290	2,760			1
24	2,290	1,300	3,680	19,800	4,500	6,670	7,540	2,390	1,720			1
25	2,070	1,200	3,560	31,700	3,950	6,010	8,920	2,190	1,380	1		
26	2,400	1,150	4,280	22,800	3,560	6,840	55,000	2,090	1,220			
27	3,920	1,060	5,620	13,500	3,190	5,380	45,400	2,190	1,140			1
28	2,960	970	9,030	9,220	2,950	4,640	28,700	4,230	1,140			
29	2,510	900	8,850	7,180		4,220	15,400	4,710	1,140			
30	2,290	820	6,660	6,170		3,560	10,200	3,310	1,070			
31	1,960		6,210	5,380		3,310		2,830				

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October November December January February March April May June July 1-19 August September	13,200	1,250	3,417	1.98	2.28
	30,800	820	3,880	2.25	2.51
	10,100	660	4,568	2.65	3.06
	35,200	4,540	12,820	7.44	8.58
	8,240	2,720	4,186	2.43	2.53
	16,000	2,290	4,636	2.69	3.10
	55,000	2,390	9,574	5.56	6.20
	7,940	2,090	4,320	2.51	2.89
	3,470	1,070	1,566	.909	1.01
	12,800	930	2,955	1.72	1.22

at Johnstown.

Kiskiminetas River at Vandergrift, Pa.

Location. Water-stage recorder, lat. 40°36'20", long. 79°33'15", a third of a mile above highway bridge at Vandergrift, Westmoreland County, two-thirds of a mile above former gaging station, and 2 miles above mouth of Pine Run. Zero of gage is 769.40 feet above mean sea level.

Drainage area. - 1,825 square miles.

Records available. - August to September 1937 in reports of U. S. Geological Survey;

November 1915 to September 1937 in reports of Pennsylvania Department of Forests and Waters (gage heights only prior to 1937).

Extremes. - Maximum discharge during period, 8,770 second-feet Aug. 27 (gage height, 9.57 feet); minimum, 447 second-feet Sept. 30 (gage height, 3.38 feet).

1915-37: Maximum discharge, 200,000 second-feet Mar. 18, 1936 (gage height, 41.64 feet, from floodmark at present site), from rating curve extended on basis of slope-area determinations; minimum not determined.

Remarks. - Records excellent. Some regulation at low stages from operation of mills at Johnstown.

Daily and monthly discharge, in second-feet, 1936-37

ay	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1 2 3 4 5												1,010 874 803 996 2,890
6 7 8 9												4,850 2,820 1,960 1,540 1,240
11 12 13 14 16											1,190 915 749	1,060 1,150 1,240 988 860
16 17 18 19 20											630 565 540 531 531	785 725 695 668 620
21 22 23 24 25											934 1,480 1,110 1,100 785	595 580 555 526 513
26 27 28 29 30											779 5,090 4,900 2,430 1,630 1,240	500 479 463 471 451
		Mo	onth			Maximum	Minim	um.	Mean	Per square		n-off in inches
Nove Decident Jan Feb Mar Apr May Jun Jul Aug	ember ember uary ruary ch il e y uat13	-31				5,090	53		1,428 1,097	0.78		0.55
	tember.					4,850	45	1	1,097	.60	01	.67

Blacklick Creek at Blacklick, Pa.

Location. - Chain gage, lat. 40°28'25", long. 79°12'15", at highway bridge at Gratton, a quarter of a mile northwest of Blacklick, Indiana County, and three-quarters of a mile below mouth of Two Lick Creek. Zero of gage is 945.94 feet above mean sea level.

Drainage area. - 390 square miles.

Drainage area. - 390 square miles.

Records available. - August 1904 to September 1913, October 1918 to September 1921,

October 1931 to September 1937 in reports of U. S.Geological Survey; August
1904 to December 1905, January 1907 to September 1937 in reports of Pennsylvania Department of Forests and Waters.

Average discharge. - 30 years (1907-37), 676 second-feet.

Extremes. - Maximum discharge during year, 9,100 second-feet Jan. 25 (gage height,
8.8 feet, from graph based on gage readings), from rating curve extended on
basis of slope-area determination; minimum, 62 second-feet Aug. 3 (gage height,

1904-37: Maximum discharge, 51,700 second-feet Mar. 18, 1936 (gage height, 15.88 feet, from floodmark), from rating curve extended on basis of slope-area determination; minimum, 6 second-feet Sept. 12, 16-27, 1908 (gage height, 1.88 feet).

Remarks.- Records fair. Discharge for period of ice effect, Nov. 28 to Dec. 4, determined from gage heights, weather records, and by comparison with records for stations in adjacent drainage areas. Discharge for periods of missing gage record, Jan. 8-15, Feb. 18-21, Mar. 2, 3, 13-19, Mar. 29 to Apr. 8, Apr. 11, 12, June 5-9, 12, 22, Sept. 19-21, determined by comparison with records for stations mentioned above. Discharge for high stages determined from graphs based on twice-daily gage readings. Slight regulation at low stages from power, operations upstream, in second-feet, 1936-37

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,910	450	100	1,600	1,070	587	470	1,340	609	143	102	230
2	1,250	653	110	1,820	880	560	480	1,070	515	134	71	184
3	790	1,060	125	2,040	632	560	470	880	515	174	64	156
4	590	2,500	150	1,820	632	599	430	750	522	200	79	174
5	420	5,950	180	1,300	670	1,460	450	770	420	244	75	1,050
6	390	3,020	320	1,010	594	1,120	500	2,480	270	156	68	928
7	420	1,930	2,500	1,820	594	880	570	1,440	210	125	157	536
8	555	1,400	1,550	2,530	670	750	500	1,120	190	104	131	352
9	750	1,150	1,060	2,040	1,320	750	729	880	190	137	112	249
10	2,040	875	850	4,680	1,210	670	835	750	204	106	160	221
11	1,600	750	1,060	3,050	925	594	670	662	217	206	580	209
12	1,150	590	1,710	2,280	835	594	590	602	190	388	284	346
13	790	555	1,250	1,820	594	700	529	867	152	209	249	196
14	630	450	1,010	2,040	594	670	604	1,370	163	239	184	192
15	485	420	830	3,050	587	630	2,650	1,280	273	235	137	160
16	420	420	750	2,040	587	580	2,030	1,070	278	304	125	143
17	2,610	390	920	1,750	594	540	1,340	1,020	177	2,740	102	137
18	3,250	360	750	4,650	558	580	1,070	972	1.84	2,530	104	131
19	1,820	275	555	3,350	632	650	880	792	192	1,080	119	120
20	1,200	297	1,820	2,040	670	864	750	670	184	640	125	110
21	920	270	1,710	4,580	857	3,960	725	617	224	448	102	100
22	750	264	1,250	7,300	1,120	1,940	3,080	587	1,130	340	202	94
23	670	231	830	4,450	925	1,520	2,630	580	613	340	200	92
24	630	248	875	3,680	670	1,070	1,710	488	402	239	137	88
25	875	180	920	7,420	670	1,070	1,730	389	273	204	112	77
26	2,040	193	1,150	4,000	632	972	8,280	389	230	268	1,100	73
27	1,820	147	1,600	2,260	594	792	5,200	670	239	209	3,020	81 71
28	790	130	2,530	1,520	632	710	5,400	1,680	204	149	945	
29	670	115	1,820	1,230		620	3,010	1,460	184	137	508	73
30	630	105	1,500	972		570	1,960	1,020	152	114	365	68
31	520		1,820	1,020		520		750		112	284	

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	3,250	390	1,077	2.76	3.18
November	5,950	105	846	2.17	2.42
	2,530	100	1,083	2.78	3.20
December	7,420	972	2,747	7.04	8.12
January	1,320	558	748	1.92	2.00
February	3,960	520	906	2.32	2.68
March	8,280	430	1,676	4.30	4.80
April	2,480	389	949	2.43	2.80
May	1,130	152	310	.795	.88
June	2.740	104	408	1.05	1.21
July	3,020	64	323	.828	.95
August	1,050	68	221	.567	.63
September	1,000	00	221	.001	
The year	8,280	64	945	2.42	32.87

Loyalhanna Creek at New Alexandria, Pa.

Location. - Wire-weight gage, lat. 40°23'40", long. 79°25'55", at highway bridge
at New Alexandria, Westmoreland County, 1 3/4 miles below mouth of Crabtree
Creek. Zero of gage is 917.26 feet above mean sea level.

Drainage area. - 265 square miles.

Records available. - October 1919 to September 1921, October 1931 to September 1937
In reports of U. S. Geological Survey; August 1913 to July 1923, November 1925
to September 1937 in reports of Pennsylvania Department of Forests and Waters.

Average discharge. - 14 years (1919-22, 1926-37), 455 second-feet.

Extremes. - Maximum discharge observed during year, 15,900 second-feet Apr. 26 (gage height, 15.09 feet), from rating curve extended on basis of slope-area and contracted-opening determinations; minimum, 7.5 second-feet Sept. 25 (gage height, 1.90 feet); minimum daily discharge, 10 second-feet Sept. 25.

1913-23, 1925-37: Maximum discharge, 31,000 second-feet Mar. 18, 1936 (gage height, 20.96 feet, from floodmark), from rating curve extended on basis of slope-area and contracted-opening determinations; minimum, 2.4 second-feet Oct. 3, 1927 (gage height, 1.46 feet).

Remarks. - Records fair. Discharge for period of ice effect, Nov. 28 to Dec. 4, determined from gage heights, weather records, and by comparison with records for stations in adjacent drainage areas. Discharge for high stages determined from graphs based on twice-daily gage readings. Some regulation at low stages

from graphs based on twice-daily gage readings. Some regulation at low stages from power operations upstream.

Daily and monthly discharge, in second-feet, 1936-37

Apr.

Mar.

Feb.

Dec.

Nov.

Oot.

July

June

Aug.

Sept.

Nov Dec Jan Feb Mar Apr May Jun Jul Aug	ember uary ruary eh il y ust tember				4 2 4 11	1,060 1,300 2,740 1,920 1,460 2,460 1,000 937 277 1,130 273 277	76 105 100 606 280 210 246 243 25 55 36 10		273 545 741 899 592 576 293 499 127 292 87.5 60.2	1.03 2.06 2.80 7.17 2.23 2.17 4.88 1.88 .479 1.10 .330 .227	2. 3. 8. 2. 5. 2.	19 30 23 27 32 50 44 17 53 27 38
		Non	nth		Ma	ximum	Minimum	1	Mean	Per square mile	in	off in
26 27 28 29 30 31	259 380 242 222 202 176	174 156 130 115 105	870 1,080 1,320 930 810 840	2,530 1,530 1,080 930 780 840	320 293 280	692 578 495 468 390 356	11,000 3,740 1,860 1,200 846	243 340 531 452 331 260	78 41 26 38 58	144 112 94 78 78 108	182 273 243 126 84 74	20 20 20 20
21	275	207	1,200	3,470	578	2,460	663	350	171	231	47	30
22	234	234	1,020	4,880	721	1,460	2,240	313	243	218	84	33
23	206	196	606	3,510	578	1,080	1,390	378	126	163	141	26
24	202	207	550	3,130	468	900	960	282	98	148	68	23
25	164	170	606	4,920	416	870	1,490	252	25	152	47	10
16	129	267	431	1,200	578	250	1,530	642	141	670	36	41
17	911	230	495	1,180	416	210	1,080	614	108	1,130	36	33
18	1,060	246	400	4,110	366	310	840	531	152	1,000	38	36
19	506	214	328	2,360	421	468	692	427	130	504	36	36
20	404	214	1,720	1,780	468	812	550	378	108	243	36	28
11	284	421	663	2,270	870	320	441	504	148	141	84	47
12	246	328	900	1,600	721	250	421	478	119	264	47	91
13	187	297	663	1,140	634	315	361	642	91	173	41	47
14	161	288	550	1,080	606	302	915	937	98	1,020	47	50
15	136	263	495	1,460	523	280	3,050	699	163	614	41	47
6 7 8 9	95 101 136 118 667	1,260 1,020 840 634 523	623 2,740 1,080 751 606	606 1,400 1,460 1,200 3,030	468 468 802 1,460 1,140	634 522 495 468 356	263 246 254 572 586	642 699 699 757 614	159 119 81 98 91	235 156 105 126 141	47 156 126 126 119	179 126 112 .74 58
1 2 3 4 5	267	150	100	741	751	263	310	699	218	58	78	65
	179	386	110	1,350	663	338	347	558	218	65	91	52
	132	429	125	1,320	578	310	320	452	277	55	65	44
	101	2,340	150	1,200	495	356	333	402	227	350	47	141
	76	4,300	214	780	495	840	284	369	156	470	47	277

Monongahela River at Charleroi, Pa.

Location. - Water-stage recorder, lat. 40°08'30", long. 79°53'35", 1,100 feet above dam at Lock 4, at Charleroi, Washington County, half a mile below mouth of Maple Creek. Zero of gage is 735.33 feet above mean sea level.

Drainage area. - 5,213 square miles.

Records available. - March 1886 to March 1905, October 1933 to September 1937 in reports of U. S. Geological Survey; October 1933 to September 1937 in reports of Pennsylvania Department of Forests and Waters.

Extremes. - Maximum discharge during year, 107,000 second-feet Apr. 27 (gage height, 16.84 feet); minimum, 221 second-feet Oct. 6 (gage height, 2.12 feet); minimum daily discharge, 263 second-feet Oct. 5.

1886-1905, 1933-37: Maximum discharge (estimated), 156,000 second-feet July 11, 1888 (gage height, 42.0 feet on lower gage at old lock downstream, or about 26.1 feet on present gage); minimum not determined.

Remarks. - Records good except those below 5,000 second-feet, which are fair. Regulation at low stages from operation of locks upstream.

Day	Oot.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1 2 3 4 5	342 330 284 274 263	1,580 2,040 4,260 8,590 31,500	1,060 1,400 2,240 2,540 3,050	14,000 19,800 31,500 31,500 20,300	7,300 7,300 7,080 7,300 7,300	4,040 4,660 4,510 4,330 5,880	4,900 3,940 4,880 3,720 2,960	14,600 9,040 5,950 6,180 5,550	9,420 7,710 12,200 10,400 7,550	3,020 2,670 3,520 3,860 2,480	935 733 682 665 565	3,280 2,730 2,730 2,830 3,180
8 9 10	284 330 380 445 1,060	27,200 16,100 7,600 6,620 6,620	3,660 22,200 40,900 24,800 14,200	13,400 13,100 20,200 20,900 28,900	6,710 4,360 10,300 57,900 61,200	8,300 8,050 7,800 7,800 6,850	3,490 3,320 3,690 4,770 4,680	9,810 13,700 12,700 8,090 6,620	4,640 3,660 3,970 3,180 2,960	2,240 2,190 2,050 1,880 1,910	648 806 716 733 970	12,700 25,600 15,400 9,140 5,950
11 12 13 14 15	1,270 750 631 490 520	6,130 5,000 4,580 3,350 2,640	10,600 10,200 10,000 9,620 8,300	59,000 37,900 24,000 18,800 21,100	38,600 22,900 15,000 9,380 8,320	6,400 5,950 5,480 4,330 5,750	3,250 2,990 3,800 3,800 4,720	6,180 5,550 5,550 5,750 11,100	3,420 3,660 3,280 2,860 4,300	2,980 4,360 5,820 5,950 6,180	1,140 1,460 1,680 1,490 1,420	4,40 3,52 2,58 2,61 2,22
16 17 18 19 20	460 1,090 9,120 9,080 8,200	2,670 2,510 2,190 2,070 1,990	7,300 6,620 6,180 5,350 13,100	28,000 26,300 49,300 71,500 41,900	8,900 8,300 9,620 8,550 8,300	6,180 7,080 9,020 13,200 25,600	8,490 11,000 8,980 7,080 7,300	20,900 17,400 13,900 10,700 9,350	7,080 7,080 5,040 5,750 6,180	4,550 3,860 3,450 2,580 2,580	1,020 916 880 880 880	1,83 1,58 1,53 1,26 1,12
21 22 25 24 25	4,960 2,920 2,730 2,240 1,490	1,990 1,630 1,420 1,760 1,780	19,500 19,500 13,800 9,930 5,950	54,900 75,700 89,400 81,600 93,100	7,550 8,120 10,700 9,350 9,080	46,900 39,900 24,400 18,100 12,800	6,850 15,300 21,300 15,400 12,500	10,400 9,500 5,950 5,950 5,750	6,400 10,200 27,200 21,300 11,900	2,360 2,070 1,910 1,700 1,580	975 898 824 1,520 6,940	1,08 1,24 89 82 82
26 27 28 29 30 31	1,440 2,450 2,390 3,020 3,090 2,310	1,760 1,240 1,680 1,310 975	5,070 5,040 6,840 11,300 10,700 11,000	72,600 37,200 23,600 18,400 14,000 9,960	8,050 6,440 4,000	13,200 12,800 8,900 7,080 7,080 6,180	73,100 97,300 50,800 29,000 20,200	4,700 6,500 29,900 41,900 22,400 14,400	6,120 4,040 4,360 5,350 3,820	1,530 1,600 1,600 1,460 1,510 1,310	22,000 24,400 17,900 9,940 5,150 4,040	61 59
		Mos	nth		M	aximum	Minim	am.	Mean	Per squa		n-off in
Nove Dece Jant Febr Marc Apri May June July Augu	ember emb					9,120 51,500 40,900 93,100 61,200 46,900 97,300 41,900 27,200 6,180 24,400 25,600	263 975 1,060 9,960 4,000 4,040 2,960 4,700 2,860 1,310 565 597		2,085 5,360 0,390 7,480 5,500 1,240 1,780 1,480 7,168 2,799 5,671 5,813	0.400 1.03 1.99 7.19 2.59 2.16 2.84 2.20 1.38 .537 .704		0.46 1.15 2.29 8.29 8.29 2.70 2.49 3.17 2.54 1.54 .62
200												

South Fork of Termile Creek at Jefferson, Pa.

Location. - Chain gage, lat. 39°55'25", long. 80°04'25", at highway bridge 1 mile southwest of Jefferson, Greene County, and 3½ miles below mouth of Ruff Creek. Zero of gage is 852.54 feet above mean sea level.

Drainage area. - 180 square miles.

Records available. - October 1931 to September 1937.

Extremes. - Maximum discharge during year, 8,100 second-feet Nov. 4 (gage height, 13.8 feet, from graph based on gage readings), from rating curve extended above 1,500 second-feet; minimum, 0.7 second-foot Oct.1 (gage height, 0.04 foot).

1931-37: Maximum discharge, that of Nov. 4, 1936; minimum, 0.1 second-foot

Sept. 22 to Oct. 2, 1932.

Remarks. - Records poor. Discharge for period of ice effect, Feb. 27 to Mar. 3, determined from gage heights, weather records, and by comparison with records for stations in adjacent drainage areas. Discharge for periods of questionable gage record, Jan. 20, 21, Feb. 11, Mar. 22-27, Apr. 27, 28, May 6, determined by comparison with records for stations mentioned above. Discharge for high stages determined from graphs based on twice-daily gage readings. Slight regulation at low stages from pumpage at Waynesburg.

Daily and monthly discharge, in second-feet, 1936-37

Day	Oot.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.9	188	17	525	350	.94	68	320	130	17	6.4	2.0
2	1.1	200	26	916	264	88	69	225	92	47	6.0	1.9
3	1.2	528	59	841	173	86	63	153	56	242	5.3	1.9
4	1.1	3,310	69	410	147	95	59	126	90	130	3.7	76
5	1.0	3,990	93	410	132	162	56	110	42	166	3.5	582
6	.9	1,040	90	200	164	134	95	95	37	60	3.2	630
7	1.0	373	110	710	144	120	55	122	62	37	25	212
8	1.9	238	358	595	322	114	49	182	48	25	22	66
9	23	212	264	588	853	101	177	138	34	19	14	54
10	1,320	147	200	2,310	770	75	164	122	31	315	6.4	17
11	535	116	228	1,130	306	72	118	90	104	578	7.6	13
12	150	75	425	670	251	62	104	75	103	278	14	9.2
13	108	56	365	440	225	75	88	105	31	144	10	0.4
14	37	44	251	439	238	86	86	212	23	159	6.8	5.8
15	23	40	149	2,980	212	88	225	673	50	151	4.8	5.8
16	17	33	122	1,080	238	78	292	292	69	166	3.9	3.9
17	34	27	106	790	200	172	200	425	50	296	2.9	3.7
18	251	25	83	3,010	184	292	164	292	33	365	2.8	3.4
19	144	19	105	1,420	184	350	130	251	64	238	3.4	2.8
20	74	17	1,620	1,230	182	580	101	177	23	97	2.8 3.4 3.4	2.4
21	42	24	675	2,410	182	750	114	136	175	80	2.9	2.4
22	29	24	560	4,980	212	630	1,400	101	398	50	3.1	2.3
23	19	21	472	2,050	212	440	705	90	106	51	6.4	2.1
24	16	19	292	2,340	179	335	380	85	114	27	12 .	1.9
25	17	16	278	2,800	134	251	954	59	63	23	19	1.9
26	39	16	335	935	90	177	3,260	49	50	38	9.2	1.4
27	200	20	560	560	110	124	1,080	759	156	21	9.2 5.3	1.4
28	92	24	490	410	100	114	595	1,180	120	18	4.4	1.2
29	60	22	455	350		106	472	568	48	14	3.5	1.5
30	44	16	292	306		88	380	278	34	9.6	2.8	1.3
31	41		525	306		81		184		7.6	2.6	

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	1,320	0.9	107	0.594	0.68
November	3,990	16	363	2.02	2.25
December	1,620	17	312	1.73	1.99
January	4,980	200	1,230	6.83	7.87
February	853	90	241	1.34	1.40
March	750	62	194	1.08	1.24
April	3,260	49	390	2.17	2.42
May	1,180	49	248	1.38	1.59
June	398	23	81.2	.451	.50
July	578	7.6	125	.694	.80
August	25	2.6	7.30	.041	.05
September	630	1.2	57.2	.318	.35
The year	4,980	.9	281	1.56	21.14

Youghiogheny River at Connellsville, Pa.

Location. - Water-stage recorder, lat. 40°01'05", long. 79°35'40", at Crawford Avenue Bridge, at Connellsville, Fayette County, three-quarters of a mile above mouth of Mounts Creek. Zero of gage is 860.13 feet above mean sea level.

Drainage area. - 1,326 square miles.

Drainage area. - 1,326 square miles.

Records available. - October 1918 to September 1921, October 1931 to September 1937

in reports of U. S. Geological Survey; July 1908 to September 1937 in reports
of Pennsylvania Department of Forests and Waters.

Average discharge. - 28 years (1908-18, 1919-37), 2,503 second-feet.

Extremes. - Maximum discharge during year, 55,100 second-feet Apr. 26 (gage height,
15.87 feet), from rating curve extended above 40,000 second-feet; minimum,
142 second-feet Sept. 28 (gage height, 0.88 foot); minimum daily discharge,
180 second-feet Sept. 28.

1908-37: Maximum discharge, 92,500 second-feet Mar. 18, 1936 (gage
height, 20.28 feet), from rating curve extended above 40,000 second-feet;
minimum, 11 second-feet Sept. 23, 26, 27, 1908, Oct. 18, 1910 (gage height,
0.11 foot).

0.11 foot).

Remarks. - Records good except those for periods of recorder failure, Oct. 1-10, Nov. 23 to Dec. 3, which are fair and were determined from graphs based on once-daily gage readings. Regulation from operation of hydroelectric plants upstream.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	416	1,020	503	6,390	4,320	1,660	2,250	4,590	1,890	1,030	477	1,060
2	599	1,640	529	6,140	3,750	1,970	1,840	3,620	2,960	940	307	1,000
3	496	2,400	762	7,050	3,040		1,720	2,980	2,620	1,150	269	790
4	464	5,980	1,150	7,060	2,630	2,180	1,610	2,560	2,210	1,160	347	815
5	434	17,800	1,050	5,020	2,710	3,520	1,450	2,430	1,900	1,660	340	964
6	274	8,850	2,290	3,750	2,250	3,940	1,660	5,360	1,400	1,150	315	2,140
7	349	5,550	13,500	5,140	1,970	2,960	1,660	4,900	1,200	1,140	564	1,870
8	484	4,040	8,560	8,910	3,180		1,450	3,990	1,220	974	489	1,290
9	926	3,480	4,950	8,190	9,550	2,790	1,680	4,490	1,110	870	293	1,040
10	873	2,960	3,570	15,600	9,150	2,480	2,040	3,710	1,080	786	302	821
11	712	2,320	3,450	21,700	6,170	2,180	1,780	3,070	1,330	707	380	820
12	578	1,900	5,740	11,000	4,720	2,040	1,660	2,720	1,660	1,620	364	776
13	416	1,720	4,220	7,270	3,940	1,970	1,610	2,480	928	1,480	303	617
14	404	1,560	3,210	5,540	3,210	1,780	1,740	2,400	689	5,790	303	632
15	386	1,500	2,710	5,540	2,960	1,660	4,090	2,240	934	4,390	260	506
16	354	1,400	2,320	6,170	3,040	1,840	5,370	2,030	1,220	2,720	300	534
17	4,180	1,210	2,180	4,820	2,790	1,720	3,850	2,030	948	1,960	181	480
18	7,300	1,180	2,110	13,000	2,400	1,970	3,040	2,240	880	1,740	328	502
19	3,810	1,170	1,780	12,400	2,320	2,320	2,790	2,030	829	1,360	354	428
20	2,320	1,040	3,810	8,910	2,550	4,980	2,710	1,820	689	1,070	295	358
21	1,660	1,030	3,660	12,400	2,710	14,300	2,480	1,660	653	966	220	326
22	1,260	1,050	2,870	22,200	3,980	10,400	4,950	1,420	985	789	420	368
23	1,120	962	2,040	20,700	4,320	7,280	6,250	1,390	1,080	1,030	415	354
24	1,150	873	1,780	14,400	3,570	5,960	4,520	1,380	805	828	534	365
25	962	821	2,180	20,800	3,210	5,860	4,550	1,290	569	750	506	396
26	1,000	830	2,400	14,300	2,630		39,500	1,370	467	719	2,560	385
27	1,670	674	3,400	8,670	2,400	4,570	22,600	1,870	443	1,030	7,060	249
28	1,610	543	7,000	8,170	1,840		12,200	4,780	617	785	3,780	180
29	1,250	788	7,280	4,820		3,210	8,210	5,000	976	467	2,010	313
30	1,060	636	5,320	4,130		2,790	5,950	3,300	1,050	540	1,270	334
31	1,100		5,270	3,660		2,480		2,330		635	1,060	
		Mon	th		1	Maximum	Minimo		Mean	Per squanile		-off in
						7,300	274		1,278	0.964	1	1.11
						17,800	543		2,564	1.93		2.15
						13,500	503		3,600	2.71		3.12
		• • • • • • • • •				22,200	3,660		9,737	7.34		8.46
						9,550 14,300	1,840		3,618 3,728	2.73		2.84 3.24
						39,500	1,450		5,240	3.95		4.41
						5,360	1,290		2,8 2 2	2.13		2.46
						2,960	443		1,178	.888	3	.99
						5,790	467		1,362	1.03		1.19
						7,060	181		858	.64		.75
						2,140	180		690	.520		.58

Day Oct.

Casselman River at Markleton, Pa.

Location. - Chain gage, lat. 39°51'35", long. 79°13'40", at highway bridge at Markleton, Somerset County, 2 miles southwest of Casselman and 7 miles below mouth of Coxes Creek. Zero of gage is 1,655.29 feet above mean sea level.

mouth of Coxes Creek. Zero of gage is 1,655.29 feet above mean sea level.

Drainage area. - 382 square miles.

Records available. - August to September 1913, October 1920 to September 1921, October 1931 to September 1937 in reports of U. S. Geological Survey; August 1913 to September 1937 in reports of Pennsylvania Department of Forests and Waters.

Average discharge. - 17 years (1920-37), 620 second-feet.

Extremes. - Maximum discharge during year, 25,600 second-feet Apr. 26 (gage height, 12.8 feet, from graph based on gage readings), from rating curve extended on basis of slope-area determination; minimum, 28 second-feet Aug. 18 (gage height, 1.48 feet).

height, 1.48 feet).

1913-37: Maximum discharge, 35,800 second-feet Mar. 17, 1936 (gage height, 16.4 feet, from floodmark), from rating curve extended on basis of slope-area determination; minimum, 11 second-feet Aug. 13, 1930, July 23, 1936.

Remarks.- Records poor. Discharge for periods of ice effect, Nov. 28 to Dec. 6,

Feb. 27 to Mar. 3, determined from gage heights, weather records, and by comparison with records for stations in adjacent drainage areas. Discharge for high stages determined from graphs based on twice-daily gage readings. Slight regulation at low stages from power operations upstream.

Daily and monthly discharge, in second-feet, 1936-37

July

June

-	114	197	160	1,620	1,040	370	459	1,300	317	127	57	234
1	108	336	138	1,300	686	370	459	1,000	488	114	48	186
2 3			170	1,360	550	420	430	840	598	163	44	140
	76	430			519	550	392	760	361	272	40	124
4	55	2,180	220	1,360	219	960	408	651	326	190	39	250
5	37	5,000	190	880	519	960	200					
6	32	1,780	600	725	459	723	403	1,600	272	160	50 58	854 567
7	34	1,140	3,740	1,220	488	616	459	1,000	234	112		
8	83	880	1,180	2,170	853	519	392	920	204	93	69	263
9	183	840	760	2.440	1,780	519	519	920	180	82	88	190
LO	122	686	686	7,800	1,560	459	488	760	186	. 74	77	152
1	102	583	1,100	6,830	840	459	408	686	298	94	176	146
S	91	488	1,760	2,960	800	414	430	616	303	152	102	186
3	74	430	1,090	1,760	723	488	403	488	193	150	89	143
	65	403	800	1,300	686	398	381	616	157	478	60	11:
4	52	414	723	1,300	583	414	1,140	519	223	408	44	9:
			63.6		583	381	1,000	488	200	255	35	87
16	81	392	616	1,140	459	321	760	583	154	154	34	80
17	3,820	366	686	983		430	651	550	208	154	30	8
18	1,890	419	550	4,520	381 414	459	651	488	193	143	36	70
19	840 550	341 341	488 960	2,660	550	1,590	550	414	143	112	51	70
					507		430	392	134	91	49	6
15	425	336	723	3,030	583	5,290	1,280	376	215	99	67	6
25	346	321	616	7,680	1,000	2,110	1,200	398	173	102	134	5
23	298	285	387	6,330	880	1,420	1,200		122	108	102	5
4	289	280	488	4,040	651	1,140	840	376			100	5
25	255	246	550	7,680	651	1,480	2,310	321	104	106	100	34
26	303	227	686	3,500	488	1,300	19,100	280	93	169	2,260	40
27	392	134	1,210	1,840	420	880	8,260	317	91	114	1,770	4
28	298	122	2,600	1,240	380	760	4,790	755	106	83	678	4
29	246	200	1,740	1,040		651	2,640	651	195	70	356	4:
50	211	180	1,190	960		583	1,690	430	122	58	238	4
31	242	100	2,000	880		519		346		54	193	
		Mo	nth			Maximum	Minim	am	Mean	Per squa		-off in
						T 000	32		378	0.990		1.14
						5,820	122		666	1.74		1.94
						5,000	138		929	2.43		08.9
						3,740	723	0	709	7.09		8.17
						7,800		2	697	1.82		1.89
						1,780	380		871	2.28		2.63
						5,290	3,21	1		4.65		5.19
						19,100	381	1	,777			1.94
						1,600	280		640	1.68	1	.62
						488	91		213	.558		
						478	54		146	.382		.44
						2,260	30		231	.605		.70
						834	42		144	.377		.42
seb												

Big Piney Run near Salisbury, Pa.

Location. - Water-stage recorder, lat. 39°43'32", long. 79°02'57", an eighth of a mile above Little Piney Run, a quarter of a mile north of Maryland-Pennsylvania State line, and 2½ miles southeast of Salisbury, Somerset County.

Drainage area. - 24.5 square miles.

Records available. - June 1932 to September 1937.

Extremes. - Maximum discharge during year, about 4,300 second-feet Apr. 26 (gage height, 7.6 feet), from rating curve extended on basis of slope-area determination; no flow Aug. 13-18, 20 owing to temporary storage of water during construction operations upstream.

1932-37: Maximum discharge, that of Apr. 26, 1937; minimum, that of Aug. 13-18, 20, 1937.

Remarks. - Records excellent except those above 400 second-feet and those affected by ice, Dec. 8, which are fair. Water supply for city of Frostburg diverted

by ice, Dec. 8, which are fair. Water supply for city of Frostburg diverted 3 miles above gage not included in records except in part of monthly table. Records furnished by U. S. Geological Survey, Washington, D. C.

Daily and monthly discharge, in second-feet, 1936-37

Day	Oot.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.5	8.3	3.4	117	52	27	31	88	23	4.6	0.7	- 35
2	1.5	6.8	4.9	101	35	25	30	65	20	3.4	.7	18
2 3	.9	7.1	15 12	101	30	27	25	49	17	13	.6	13
4	.7	56	12	82	27	36	24	40	18	6.8	.6	27
5	.6	164	9.4	67	27	52	27	39	13	5.3	••	
6	.6	99	21	52	25	44	43	67	10	4.6	3.1	32
7	.6	63	129	88	22	45	35	42	8.7	3.6	2.6	22
8	2.8	47	72	177	82	44	35	40	7.4	2.8	1.1	18 14
9	2.4	38	50	226 629	98	36	45 38	37 32	6.8	2.2	2.2	10
10	1.4	28	44	929	90	30	36	32	10	1.1	2.2	
11	1.4	22	92	399	73	33	38	27	22	1.7	3.5	11
12	1.2	20	99	191	59	30	38	24	10	2.4	1.2	10
13	1.2	17	74	126	50	30	34	26	7.1	2.3	.4	0.8
14	.9	15	57	90	46	25 27	35 48	32 25	6.0 9.4	7.4	0	6.3
16	.8	16	47	85	39	21	48	25	9.2	4.0		
16	1.1	15	39	65	. 36	23	42	22	6.6	2.6	Ó	4.4
17	244	13	40	59	28	22	39	25	7.1	2.6	0	4.6
18	99	15	32	157	25 24	25	38	25	10	2.8	2.6	2.0
19	50	11	24 41	145	24	33 117	33	21	6.6 5.3	2.8	.8	4.0 3.1 2.8
20	30	11	41	124	24	117	33	10		1.0		
21	20	12	33	188	43	268	47	18	5.8 8.7	1.4	6.9	2.6 2.2 1.9
22	15	11	27	403	107	170	104	17	8.7	1.2	15	.2.5
23	13	9.7	24	391	79	129	96	20	5.3	1.1	6.6	1 0
24	10	8.8	25	224	64	101	79 348	16	2.9	1.0	16	1.8
25	8.0	8.8	28	307	50	127	340	1.4	2.0	• •		
26	12 12 8.4	8.4	59	208	41	95	2,000	14	2.6	1.0	142	1.4 1.3 1.2 1.2
27	12	6.8	65	132	36	72	518	27	3.1	.9	78	1.0
28	8.4	6.3	148	89	30	61	284	61	8.7	.8	39 24	1.0
29	7.1	6.5	120	73		48	177	44	4.2	7	17	1.9
20	52 26	5.3	92 147	59 54		36	120	36 29	0.1	.7	33	
31	20		741							-		

		Observed		Diversion	Correct	ed for divers	ion
Month	Maximum	Minimum	Mean	Mean	Mean	Per square mile	Run-off in inches
October November December January February March April May June July August September	244 164 148 629 117 268 2,000 88 23 13 142 35	0.6 5.3 3.4 52 22 22 24 14 2.6 .7 0	20.2 25.2 53.2 168 48.9 61.0 150 33.5 9.06 2.88 13.2 9.11		20.4 25.3 53.3 168 49.2 61.0 150 33.7 9.42 3.31 13.6 9.59	0.853 1.05 2.18 6.86 2.01 2.49 6.12 1.38 .384 .135 .555	0.96 1.15 2.51 7.91 2.09 2.87 6.83 1.59 .43 .16
The year	2,000	0	49.5		49.7	2.03	27.58

Laurel Hill Creek at Ursina, Pa.

Location. - Chain gage, lat. 39°48'55", long. 79°19'40", at highway bridge at Ursina, Somerset County, 2 miles above mouth. Zero of gage is 1,329.06 feet above mean sea level.

Drainage area. - 121 square miles.

Records available. - August to September 1913, October 1918 to September 1921,
October 1931 to September 1937 in reports of U. S. Geological Survey; August 1913 to September 1937 in reports of Pennsylvania Department of Forests and Waters.

Average discharge. - 21 years (1916-37), 278 second-feet.

Extremes. - Maximum discharge during year, 5,070 second-feet Apr. 26 (gage height, 7.5 feet, from graph based on gage readings), from rating curve extended on basis of slope-area determination; minimum, 15 second-feet Aug. 18, 21, Sept.

basis of slope-area determination; minimum, is second-feet Aug. 16, 21, sept. 30 (gage height, 1.70 feet).

1913-37: Maximum discharge, 10,300 second-feet Mar. 17, 1936 (gage height, 10.28 feet, from floodmark), from rating curve extended on basis of slope-area determination, no flow Aug. 22, 1917, Feb. 15, 1919; minimum daily discharge observed, 1 second-foot Aug. 22, Sept. 1, 1917.

Remarks.- Records fair. Discharge for periods of ice effect, Nov. 27 to Dec. 5, Feb. 28 to Mar. 3, determined from gage heights, weather records, and by companion with records for stations in adjacent drainage areas. Discharge

comparison with records for stations in adjacent drainage areas. Discharge for high stages determined from graphs based on twice-daily gage readings. Some regulation at low stages from power operations upstream.

Daily and monthly discharge, in second-feet, 1936-37

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	ing.	Sept.
1	103	126	92	785	377	135	211	383	111	112	39	84
2	87	302	90	720	316	140	203	326	287	93	34	60
2 3	49	404	98	688	255	150	178	255	174	130	31	58
4	35	1,170	110	657	237	203	155	215	140	122	27	49
5	29	2,020	105	458	232	537	155	230	112	170	25	106
6	27	1,020	322	331	190	329	163	657	103	155	21	211
7	32	596	1,660	880	203	297	163	430	84	103	35	119
8	76	464	920	1,100	346	237	159	556	78	78	35	71
9	119	404	474	1,020	850	255	311	688	81	60	51	60
10	96	302	372	2,460	785	232	273	436	60	65	34	49
11	73	255	537	2,050	508	220	255	341	103	63	29	55
12	71	224	752	1,030	425	190	246	292	60	119	31	60
13	60	186	480	626	297	199	224	326	45	131	29	47
14	53	174	311	480	297	166	232	237	45	1,470	25	3'
15	49	163	273	566	255	166	880	203	65	785	20	38
16	114	155	316	537	255	133	752	174	58	508	17	25
17	1,290	126	273	452	203	147	537	199	45	321	17	34
18	955	140	255	2,080	182	178	458	220	76	237	16	28
19	480	140	317	1,410	163	203	331	174	73 53	178	19	21
20	273	122	752	955	211	578	260	155	55	133	17	
21	232	112	537	1,870	224	1,540	304	147	58	119	16	2
22	190	119	393	3,390	420	1,020	688	130	106	119	18	2
23	182	100	273	2,160	316	688	596	147	65	106	60	28
24	130	100	297	1,740	268	596	474	119	47	140	35	20
25	112	93	278	2,920	250	752	630	112	39	119	38	19
26	159	87	321	1,450	207	752	3,960	109	34	116	726	14
27	292	86	478	850	190	480	1,790	119	37	81	827	1
28	170	92	1,100	566	150	398	1,060	174	60	60	388	1'
29	163	110	1,020	452		336	688	159	55	49	178	10
30	144 133	100	688 804	352 346		273 242	480	136 112	55	45 41	126 76	1.
		Мог	nth		M	aximum	Minimu	m	Mean	Per square		-off in
Oct	oher				1	.290	27		193	1.60		1.84
					_	,020	86		316	2.61		2.91
						.660	90		474	3.92		4.52
_						,390	331		141	9.43		0.87
- duri						000	350	-,	700	0 55		0 00

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	1,290	27	193	1.60	1.84
November	2,020	86	316	2.61	2.91
December	1,660	90	474	3.92	4.52
January	3,390	331	1,141	9.43	10.87
February	850	150	308	2.55	2.66
March	1,540	133	380	3.14	3.62
April	3,960	155	561	4.64	5.18
May	688	109	257	2.12	2.44
June	287	34	80.3	.664	.74
July	1,470	41	194	1.60	1.84
August	827	16	98.1	.811	.94
September	211	16	48.2	.398	.44
The year	3,960	16	339	2.80	38.00

Turtle Creek at Trafford, Pa.

Location. - Chain gage, lat. 40°23'20", long. 79°45'05", at highway bridge at Blackburn railroad station, half a mile northeast of Trafford, Westmoreland County, 1½ miles above mouth of Brush Creek, and 7 miles above confluence with Monongahela River. Zero of gage is 780.27 feet above mean sea level.

Drainage area. - 54.8 square miles. Records available. - October 1920 to September 1921, October 1931 to September 1937 in reports of U. S. Geological Survey; July 1914 to September 1937 in reports

of Pennsylvania Department of Forests and Waters. Average discharge. - 17 years (1920-37), 80.8 second-feet.

Extremes. - Maximum discharge during year, 3,690 second-feet Jan. 15 (gage height, 6.0 feet, from graph based on gage readings), from rating curve extended above 500 second-feet; minimum, 2.5 second-feet at times in September (gage height,

500 second-reet; minimum, 2.5 second-reet at times in September (gage height, 0.30 foot).

1914-37: Maximum discharge, 4,420 second-feet Mar. 15, 1933 (gage height, 8.5 feet, from graph based on gage readings), from rating curve extended above 500 second-feet; minimum, 0.1 second-foot Oct. 6, 7, 1922.

Remarks.- Records fair except those above 700 second-feet, which are poor. Discharge for periods of ice effect, Nov. 27 to Dec. 6, Feb. 26 to Mar. 1, Mar. 10-12, determined from gage heights, weather records, and by comparison with records for stations in adjacent drainage areas. Discharge for high stages determined from graphs based on twice-daily gage readings. Some regulation from power from graphs based on twice-daily rage readings. Some regulation from power operations upstream.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	90	29	12	135	143	37	41	112	21	5.3	10	7.5
2	44	32	13	319	108	40	39	95	17	5.6	10	6.0
3	26	121	14	244	94	37	40	80	20	12	9.5	4.6
4	17	1,310	23	146	94	36	35	71	18	6.5	8.0	180
5	13	868	27	108	84	47	35	79	18	17	7.0	148
6	8.0	259	55	80	76	45	33	84	11	6.0	8.0	49
7	22	162	232	352	60	38	30	64	12	5.0	42	30
8	30	112	97	228	154	38	28	60	10	5.0	26	22
9	36	94	66	174	306	35	39	56	10	22	18	17
	1,060	73	61	413	214	32	34	47	13	59	236	13
11	187	55	95	259	135	32	30	44	15	66	136	13
12	94	52	97	200	112	35	26 23	42	10	74	44	10
13	54	48	82	143	99	-26	23	77	10	263	32	9.
14	42	44	55	797	104	18	55	92	15	278	20	8.
15	32	36	52	1,570	84	27	514	67	16	187	16	6.
16	27	33	40	276	84	24	192	59	9.0	562	12	5.
17	142	27	48	341	59	26	114	63	11	892	10	4.
18	116	27	39	1,320	61	36	94	60	14	354	9.5	4.
19	73	20	54	445	61	65	61	52	7.5	141	9.0	6.0
20	56	25	409	460	61	155	58	42	8.5	84	7.5	4.
21	44	24	200	1,040	60	522	79	39	270	59	144	3.
22	36	22	128	1,960	64	214	539	45	146	48	84	3.0
23	30	20	92	640	60	143	239	38	27	46	28	2.
24	32	18	85	1,230	58	124	146	31	17	36	19	2.
25	24	17	84	1,280	45	118	933	29	12	31	14	3.
26	123	18	124	413	40	87	2,350	33	10	37	15	3.
27	92	18	187	244	37	68	697	40	7.5	24	14	2.
28	66	16	162	174	36	56	309	44	8.0	21	10	2.
29	53	14	124	162		55	200	37	6.5	17	6.5	3.
30	44	13	116	128		55	148	27	6.5	17	25	2.
31	34		200	137		48		22		13	16	

Month	Maximum	Minimum	Mean	Per square mile	Run-off in
October	1,060	8.0	88.6	1.62	1.87
	1,310	13	120	2.19	2.44
November	409	12	99.1	1.81	2.09
December	1,960	80	497	9.07	10.46
January	306	36	92.6	1.69	1.76
February	522	18	74.8	1.36	1.57
March		23	239	4.36	4.86
April	2,350		55.8	1.02	1.18
May	112	22		.471	.53
June	270	6.5	25.8		2.31
July	892	5.0	109	2.00	
August	236	6.5	33.7	.615	.71
September	180	2.5	19.3	.352	.39
The year	2,350	2.5	122	2.23	30.17

BEAVER RIVER BASIN

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Location. - Staff gage, lat. 40°53'15", long. 80°20'05", at highway bridge at Wampum, Lawrence County. Zero of gage is 736.24 feet above mean sea level.

Drainage area. - 2,235 square miles.

Records available. - June to September 1914, August 1932 to September 1937.

Extremes. - Maximum discharge during year, 48,000 second-feet Jan. 25 (gage height, 21.44 feet, from floodmark), from rating curve extended on basis of contracted-opening determination; minimum, 396 second-feet Oct. 4, 5 (gage height, 2.50 feet)

feet).

1914, 1932-37: Maximum discharge, that of Jan. 25, 1937; minimum, 74
second-feet July 30, 1933 (gage height, 1.70 feet); minimum daily discharge,
97 second-feet July 22, Aug. 23, 1933.

Maximum stage known, 29.9 feet, from floodmark, Mar. 26, 1913 (discharge,
about 87,000 second-feet).

Remarks.- Records good. Discharge for high stages determined from graphs based on
twice-daily gage readings. Regulation from storage in Milton and Pymatuning
Reservoirs and from power operations upstream.

Daily and monthly discharge, in second-feet, 1936-37

ay	Oot.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	Maj	,	June	July	Aug.	Sept.
1 2	454 454	927 1,020	519 486	7,310 5,920	4,510	1,130	1,820	3,4	80	1,460 1,130 1,020	628 706 790	590 554 519	590 590 590
3 4	454 396 425	1,790 3,370 6,580	590 590 590	5,340 4,350 3,430	3,730 3,730 3,430	976 927 1,580	1,350 1,180 1,130	2,0	40	834 706	666	519 486	1,570 6,610
6	554	6,330	590	2,320	3,280	2,320	1,180	2,3	20	666	2,060	519	6,390
7 8 9	590 519 519	5,000 3,740 3,280	1,080 1,760 1,640	1,940 6,000 8,570	3,140 2,920 4,930	2,320 2,060 1,820	1,240 1,240 1,520		80	790 1,130 880	1,700 927 706	1,400 1,350 1,080	2,860
10	1,020	3,140	1,300	9,260	5,640	1,640	1,700		580	1,570	666	1,700	
11 12 13	880 7 4 7 628 519	2,580 2,320 2,060 2,060	1,330 1,940 1,700 1,180	8,080 5,770 4,730 7,080	4,570 3,730 3,430 3,140	1,240 976 927 927	1,400 1,180 1,020 927	1,	300 130 460 060	3,880 3,430 2,320 1,820	790 2,580 3,580 7,690	1,940 2,320 1,940 1,460	976 834 747
14.	454	1,820	1,020	25,200	3,140	1,240	1,860		320	3,140	5,000	1,180	747
16 17 18 19 20	454 747 1,130 1,350 1,180	1,760 1,520 1,130 1,080 1,020	927 834 747 628 590	25,300 17,600 14,900 14,900 12,600	3,140 2,580 2,190 2,060 2,190	1,640	4,030 3,140 2,190 1,820 1,460	1,	820 820 640 400 300	2,860 2,320 2,450 2,720 2,720	6,750 6,030 3,730 2,580 1,940	1,020 927 1,020 1,020 880	666 590 590
21 22 23 24 25	976 834 747 747 790	927 927 880 747 706	666 666 666 666	19,100 36,600 29,800 26,700 45,000	2,320 3,080 3,800 2,860 2,580	10,600 7,110 4,510	1,800 6,160 8,070 5,960 4,680	1,	130 080 580 460 460	4,070 7,410 8,660 6,140 3,980	1,460 1,180 927 834 666	927 1,300 1,940 1,820 1,240	1,700 976 1,020
26 27 28 29 30 31	1,080 1,703 2,060 1,460 1,180 1,020	666 628 519 519 519	1,350 2,580 3,660 3,730 3,950 7,090	35,500 27,400 12,200 6,820 5,680 5,450	2,190 1,820 1,580	5,170	22,500 27,400 18,200 10,300 5,340	3, 8, 6,	240 000 260 930 600 060	3,140 2,720 1,940 1,300 927	1,180 1,130 1,460 1,300 880 706	927 834 747 666 666	92' 92' 92' 92'
		No	nth		M	laximum	Minim	1M		Mean	Per sque		n-off in inches
Nov Dec Jan Feb Mar	ember ember uary ruary					2,060 6,580 7,090 45,000 5,640 10,600 27,400	396 519 486 1,940 1,580 927 927		14	841 ,986 ,475 1,220 3,189 3,018	0.376 .939 .660 6.36 1.43 1.35 2.14		0.43 .99 .76 7.33 1.49 1.56 2.39
Jun Jul Aug	yy					8,260 8,660 7,690 2,320 6,610	1,080 666 628 486 590			2,283 2,601 2,059 1,102 1,523	1.02 1.16 .921 .493 .684		1.18 1.29 1.06 .57 .76

45,000

3,263

19.81

The year.....

Pymatuning Reservoir at Pymatuning Dam, Pa.

Location.- Water-stage recorder, lat. 41°30'00", long. 80°27'35", in gate house at Pymatuning Dam, Crawford County, 1 3/4 miles northwest of Jamestown. Zero of gage is at mean sea level.

Drainage area.- 158 square miles.

Records available.- October 1933 to September 1937.

Extremes.- Maximum water-surface elevation during year, 1,009.16 feet June 21; minimum, 1,004.62 feet Oct. 29.

1933-37: Maximum water-surface elevation, that of June 21, 1937; minimum, 975.70 feet Oct. 15, 16, 19, 1933.

Remarks.- Records excellent. Reservoir used to regulate flow in Shenango River.

Elevation of spillway is 1,008.0 feet. Total capacity of reservoir is 8,640,000,000 cubic feet.

Elevation, in feet, 1936-37

Day	Oot.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept
1	5.16	4.72	5.41	6.38	8.66	6.60	6.20	7.89	8.25	8.45	8.26	7.67
2	5.17	4.72	5.43	6.32	8.33	6.61	6.26	7.93	8.22	8.39	8.22	7.69
3	5,12	4.89	5.45	6.46	8.14	6.63	6.24	7.94	8.25	8.44	8.18	7.73
	5.05	5.06	5.45	6.44	7.99	6.65	6.13	7.96	8.24	8.41	8.13	8.86
4	5.01			6.53	7.83	6.73	6.12	8.00	8.22	8.46	8.11	8.1
5	9.01	5.01	5.46	0.00	7.50	0.70	0.12	0.00	0.22	0.40	0.11	0.1
6	5.02	5.01	5.47	6.51	7.68	6.79	6.27	8.80	8.24	8.48	8.09	8.13
7	5.02	5.05	5.53	6.54	7.52	6.83	6.30	8.05	8.28	8.48	8.10	8.1
8	5.00	5.07	5.56	6.73	7.39	6.86	6.34	8.05	8.21	8.46	8.11	8.1
9	4.94	5.04	5.58	6.92	7.38	6.89	6.43	8.07	8.25	8.44	8.09	8.0
10	4.89	5.11	5.58	7.03	7.27	6.89	6.38	8.10	8.39	8.42	8.15	8.0
11	4.96	4.95	5.64	7.01	7.11	6.91	6.39	8.05	8.36	8.42	8.19	8.0
12	4.95	5.06	5.67	6.97	6.95	6.92	6.33	8.02	8.31	8.44	8.17	8.0
	4.92	5.10	5.68	6.88	6.80	6.93	6.28	8.11	8.26	8.41	8.16	8.0
13				7.12	6.68	6.88	6.31	8.17	8.42	8.38	8.12	7.9
14	4.88	5.03	5.68		6.57	6.81	6.43	8.16	8.59	8.40	8.07	7.9
15	4.86	5.26	5.69	7.63	0.07	0.51	0.40	0,10	0.00	0.40	0.07	1.5
16	4.35	5.24	5.70	7.76	6.56	6.74	6.48	8.12	8.56	8.54	8.03	7.9
17	4.95	5.13	5.72	7.72	6.44	6.65	6.41	8.18	8.54	8.59	7.99	7.9
18	4.90	5.31	5.73	7.98	6.36	6.58	6.48	8.17	8.73	8.61	8.03	7.8
19	4.87	5.21	5.74	8.01	6.30	6.52	6.48	8.22	8.80	8.58	7.96	7.8
20	4.86	5.17	5.76	7.78	6.28	6.51	6.50	8.18	8.69	8.57	7.94	7.7
21	4.86	5.28	5.78	8.03	6.22	6.53	6.46	8.13	8.74	8.54	7.94	7.6
22	4.94	5.28	5.79	8.28	6.39	6.51	6.60	8.14	9.00	8.53	7.95	7.5
23	4.91	5.30	5.80	8.33	6.49	6.45	6.70	8.19	8.89	8.49	7.89	7.4
	4.38	5.27	5.80	8.33	6.48	6.39	6.62	8.21	8.77	8.49	7.87	7.4
24	4.32			8.91	6.52	6.45	6.73	8.19	8.67	8.41	7.83	7.3
25	4.02	5.27	5.82	0.31	0.02	0.40	0.10	0.10	0.01	0,11	1,00	
26	4.98	5.35	5.85	9.07	6.57	6.40	7.31	8.16	8.56	8.42	7.82	7.2
27	4.87	5.36	5.91	9.04	6.59	6.36	7.61	8.22	8.51	8.41	7.80	7.1
28	4.82	5.34	6.03	8.92	6.60	6.35	7.75	8.28	8.51	8.35	7.76	7.0
29	4.75	5.41	6.08	8.82		6.23	7.84	8.27	8.50	8.31	7.72	6.9
30	4.90	5.41	5.09	8.67		6.21	7.83	8.25	3.50	8.31	7.70	6.8
31	4.72		6.28	9.72		6.21		8.23		8.29	7.68	

Note .- Add 1,000.00 feet to obtain elevations above mean sea level.

Shenango River at Pymatuning Dam, Pa.

Location. - Water-stage recorder, lat. 41°29'55", long. 80°27'30", 500 feet below mouth of Sugar Run, 550 feet below Pymatuning Dam, Crawford County, and 1½ miles northwest of Jamestown. Zero of gage is 970.00 feet above mean sea level.

Drainage area. - 167 square miles.

Records available. - June 1934 to September 1937.

Extremes. - Maximum discharge during period June 1 to Sept. 30, 1934, 263 second-feet Aug. 9(gage height, 5.20 feet); minimum, 0.1 second-foot June 30 to July 3.

Maximum discharge during water year 1934-35, 516 second-feet Aug. 15 (gage height, 574 feet); minimum, 0.3 second-foot Sept. 22, 23 (gage height, 3.36 feet).

Maximum discharge during water year 1935-36, 788 second-feet Apr. 1 (gage height, 6.80 feet); minimum, 0.6 second-foot Oct. 4, Feb. 11, 12 (gage height, 3.42 feet).

Maximum discharge during water year 1936-37, 1,910 second-feet Sept. 4

Maximum discharge during water year 1936-37, 1,910 second-feet Sept. 4 (gage height, 9.2 feet, from extension of recorder graph), from rating curve extended above 700 second-feet; minimum, 1.1 second-feet Oct. 21 (gage height,

3.48 feet). Remarks. - Records excellent except those for extremely high stages and those for periods of ice effect, which are fair. Discharge estimated for period of backwater from cofferdam, June 1-5, 1934. Discharge for periods of ice effect, Dec. 8-15, 1934, Jan. 29 to Feb. 14, 1935, determined from gage heights, weather records, and by comparison with records for stations downstream. Records for June 1, 1934, to Sept. 30, 1936, supersede those published in former reports. Regulation from storage in Pymatuning Reservoir. Corrections for storage not

Daily and monthly discharge, in second-feet, 1933-34

V. 11

Day	Oot.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1 2				-					25	0.1	54	0.2
2						-			25	.1	54	.2
3				ł					25	4.7	38	12.4
4									25	15.2	56	22
5									25	15.2	75	22 32
6									25	14.2	57	42
7									25	37	57	42
8									25	43	56	42 25
9									25	43	99	.9
10									25	43	6.7	13.3
11									25	44	2.2	32
12									15.7	44	1.1	32
13									.3	44	.7	45
14									6.2	43	.5	49
16									24	43	.4	37
16									23	44	.6	83
17									22 21	44	2.4	34
18										45	.5	3.6
19									.7	45	.3	1.9
20									19.5	44	.3	3.6 1.9 1.3
21									·54	44	13.3	1.1
22									56	44	54	.8 .8
23									54	45	54	.8
24									54	45	54	29
25									54	45	54	52
28									54	48	54	32
27									54	53	44	.4 .4 5.4 4.7
28									48	53	29	.4
29									28	54	28	5.4
30									.1	54	28 11.4	4.7
31										54	11.4	

		Observed		Storage	Corr	Corrected for storage			
Month	Maximum	Minimum	Mean	(Mean)	Mean	Per square mile	Run-off in inches		
October November December January February March April May June July August	56 54 99	0.1 .1 .3	28.8 38.5 31.8	-63.7 -81.4 +70.9	-39.9 -42.9 103	-0.240 257 .617	-0.27 30 .71		
September	83	.2	21.2	+10.8	32.0	.192	.21		

Shenango River at Pymatuning Dam, Pa.

(Continued)

included in records except in part of monthly tables. Figures with minus sign indicate that evaporation and seepage from reservoir exceeded natural flow.

Daily and monthly discharge, in second-feet, 1934-35

Day	Oot.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
				4.2	1.4	8.6	2.9	3.1	0.6	18.9	32	39 39
1	2.8	1.9	84		7.4	64	2.9	3.1	.6	18.9	59	
2	1.7	2.3	18.9	3.7	1.4	54	2.8	7.0	.7	18.4	35	26
~	1.2	2.3	8.9	3.5	1.3			8.0	1.1	18.4	1.1	13.3
3	1.0	10.3	7.3	2.9	1.2	25	2.4	0.0	1.0	18.9	.6	.7
4	1.0		5.7	2.3	1.2	40	2.2	5.4	.9	10.0	••	•
5	.8	7.2	3.1					_		00	18.4	.7
				7 0	1.1	34	2.3	7.3	.8	26		
6	.7	3.8	4.7	3.8		25	2.0	47	.8	26	23	59
7	.6	3.1	4.0	9.6	1.1		2.2	18.0	1.1	27	1.8	73
	29	2.6	3.5	32	1.1	15.7			.8	27	1.1	56
8		2.0	3.1	82	2.9	8.6	2.6	14.2		26	.7	48
9	54	2.9		36	4.8	13.4	2.4	21	.6	20	• '	
10	54	2.4	2.8	30	3.0	2002			100			43
						60	2.2	6.9	.5	27	.6	41
	54	3.2	2.3	15.2	3.3			4.4	.5	32	16.8	.7
11	45	4.0	2.2	7.8	2.2	63	3.6		4.3	32	56	.5
12				6.6	2.0	17.6	7.3	5.0			75	21
15	29	4.0	2.0	7.3	11.6	15.2	5.2	4.2	12.3	32		39
14	29	5.4	1.9		120	12.9	3.8	3.5	19.0	32	123	30
16	29	4.2	1.9	5.6	120	12.0	0.0					
10						204	3.8	2.6	22	33	107	57
	29	5.4	5.3	4.4	40	10.4			18.6	33	13.9	71
16		3.7		11.1	15.3	7.9	4.0	2.3		58	4.7	71
17	29	8.9	11.0	9.6	8.9	6.4	4.4	1.9	12.9		1.9	59
18	29	6.7	7.0		9.3	8.0	3.1	1.7	12.4	77		22
19	29	8.2	15.6	4.8			2.4	1.4	1.3	77	1.1	22
20	29	8.4	20:0	36	8.9	10.0	202					
ZU	23	000						1.4	1.4	77	48	.4
	00		12.4	110	6.3	17.3	1.9	1.4		77	37	
21	29	5.0		34	6.1	9.2	1.7	1.2	4.4		.7	44
22	17	3.3	10.0		5.7	7.9	1.7	1.2	2.8	58		75
23	.7	23	9.2	11.6		7.3	1.4	1.1	1.3	35	.6	
24	.6	11.6	12.9	6.8	6.4		2.8	1.1	.9	19.3	.4	75
	.6			4.4	18.6	5.7	2.0	1.01				
25	•••	3.7	0.0							2.9	28	75
			-	3.7	47	4.7	1.8	1.0	.6		60	63
26	1.1	3.8		0.0	28	3.8	1.1	.9	.5	.8		35
27	1.8	3.3	11.2	2.8		4.2	1.2	.8	.5	.7	40	
	3.8			2.3	12.6		1 6	.9	18.5	.5	62	38
28				2.0		5.6	1.6		18.9	17.5	75	63
29	2.0	15.1		1.9	1	3.1	3.6	1.0	10.9	30	54	
50	1.7	7 16.7	10.6			2.9		.9		30	04	

31 1.3	4.4		2.0	Storage	Corre	cted for stor	age
Month		Observed	Mean	(Mean)	Mean	Per square mile	Run-off in inches
October	23 84 110 120 64 7.3 47 22 77	0.6 1.9 1.9 1.7 1.1 2.9 1.1 .5 .5	17.3 6.26 10.9 15.1 13.2 18.4 2.78 5.79 5.39 31.5 31.6 40.2	-21.3 +165 +248 +345 +304 +375 +42.4 +146 -21.6 -62.7 -41.4 -63.7	-4.0 171 259 360 317 393 45.2 152 -16.2 -31.2 -9.8 -23.5	-0.024 1.02 1.55 2.16 1.90 2.35 .271 .910097187059141	-0.03 1.14 1.79 2.49 1.98 2.71 .30 1.05 11 22 07
September	123	.4	16.6	+117	134	.302	10.87

Shenango River at Pymatuning Dam, Pa. (Continued)

Daily and monthly discharge, in second-feet, 1935-36

400 d

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
I	81	48	1.7	2.8	1.2	6.2	723	167	71	122	122	128
2	60	48	1.6	2.8	1.1	5.0	686	164	77	122	122	125
3	25	48	1.4	23	1.2	6.9	697	164	116	60	122	125
4	16.4	48	23	32	1.7	17.5	646	164	116	79	125	125
6	57	48	43	29	2.8	14.2	674	156	110	77	125	125
6	81	48	43	11.6	3.7	6.6	708	156	79	77	91	128
7	81	48	24	7.3	1.9	4.3	638	153	79	97	62	125
8	70	34	9.2	6.2	1.2	6.7	638	153	79	122	98	125
9	50	1.1	38	48	1.1	156	674	153	79	122	122	125
10	43	1.2	11.6	41	.8	28	697	153	79	122	122	125
11	54	1.8	10.0	15.3	.7	40	663	153	79	122	122	122
12	81	3.5	7.3	12.0	.7	56	686	110	79	122	122	122
13	81	4.0	5.7	21	.8	17.5	663	4.1	111	122	122	122
14	81	3.7	10.5	12.9	1.4	14.2	610	5.8	146	119	122	122
15	63	2.4	52	8.9	2.4	34	610	2.8	140	202	122	122
16	43	1.9	56	7.7	3.3	25	604	2.0	125	216	122	122
17	60	1.7	18.5	5.3	2.2	8.7	581	1.6	103	208	122	128
18	82	1.6	12.0	7.1	1.6	4.3	567	1.4	84	170	122	125
19	82 82	18.5	10.5	5.1	1.6	6.7 9.2	556 552	4.3	84 84	131	103 95	105
20	82	38	6.6	3.8	7.4	9.2	552	2.3	0%	134	95	63
21	66	38	5.1	2.6	1.0	9.2	560	1.7	84	140	119	136
22	25	38	4.7	2.4	.9	14.2	560	1.2	90	140	128	263
23	1.3	21	4.2	2.0	.8	64	442	1.1	110	140	131	268
24	1.4	.9	3.8	1.9	48	421	309	. 9	122	140	137	181
25	48	.8	3.7	1.6	186	186	309	41	122	134	140	131
26	86	42	3.3	1.4	109	153	304	71	122	134	115	128
27	86	67	3.3	1.3	116	219	236	73	122	122	128	128
28	70	44	3.3	1.2	15.3	368	167	71	122	70	128	128
29	48	28	3.1	1.2	9.2	674	185	71	122	68	158	128
30	49	2.3	3.1	1.3		674	170	71 71	125	86	131	128
31	50		2.9	1.4		728	20-120-0	7.7		125	128	

		Observed		Storage	Cor	Corrected for storage			
Month	Maximum	Minimum	Mean	(Mean)	Mean	Per square mile	Run-off in inches		
October	86	1.3	58.2	-60.9	-2.7	-0.016	-0.02		
November	67	.8	24.4	0	24.4	.146	.16		
December	67 56	1.4	13.7	+185	199	1.19	1.37		
January	48	1.2	10.4	+190	200	1.20	1.38		
February	186	.7	17.9	+280	298	1.78	1.92		
March	728	4.3	128	+649	777	4.65	5.36		
April	723	167	537	-270	267	1.60	1.78		
May	167	.9	75.6	0	75.6	.453	.52		
June	146	71	102	-167	-65.0	389	43		
July	216	60	124	-136	-12.0	072	08		
August	158	62	120	-111	9.0	.054	.06		
September	268	63	134	-181	-47	281	31		
The year	728	.7	112	+32.1	144	.862	11.59		

Shenango River at Pymatuning Dam, Pa. (Continued)

Daily and monthly discharge, in second-feet, 1936-37

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
-							4 77	7.0	60	2.0	:160	114
,	125	57	3.3	21	1,190	3.5	4.7	6 77	32	2.0	160	128
1	125	30	3.1	21	1,190	3.3	5.2	5.7	1.4	57	160	100
2	198	12	3.7	23	1,190	3.9	4.4	4.7			160	467
3			4.7	10	1,190	13	3.7	4.2	18	16		176
4 5	272	24 45	5.0	40	1,190	26	3.5	6.0	36	1.9	160	
0				60	1,190	17	4.2	21	34	2.2	191	92
6	128	24	9.1	62	1,190	ii	4.2	8.3	35	27	264	88
7	125	12	30	86	1,140	17	3.9	5.4	35	73	204	86 84 96
8	125	8.6	11	161	1,190	8.9		4.4	36	77	200	84
	125	6.4	5.2	112	1,190	6.7	6.9		136	77	216	96
10	98	4.7	8.2	92	1,140	4.6	6.0	4.0	130	''	2,20	
10							4.7	3.3	145	75	204	131
11	67	3.7	26	373	1,140	5.7	2.7	2.9	128	75	200	131
	54	3.3	11	672	1,140	3.7	3.7		125	81	200	128
12	62	2.9	5.2	658	1,140	179	3.1	4.4	120	82	197	12
13			4.0	670	1,140	607	3.1	8.6	111		197	12
14	92 90	2.8 6.8	3.7	189	862	604	26	6.2	100	80	791	
15	"	3.5					16	5.1	160	121	197	128
	92	6.0	3.5	113	610	607	15	2.1	163	86	197	13
16	75	7.5	3.7	470	610	624	7.4	8.7		78	200	28
17		14	3.1	732	610	624	5.7	5.4	295	77	200	46
18	65		2.4		624	624	4.7	4.7	660		200	46
19	26 16	6.5 5.0	2.8	1,140	256	650	3.8	5.7	768	75	200	1
20					05	674	8.0	2.9	868	77	170	46
21	29	7.6	2.9	1,190	25	638	47	2.8	857	75	164	54
22	57	5.7	2.9	347	40			3.7	881	73	156	62
22	57	4.2	2.9	973	12	624	24	0.0	881	114	150	62
23	57	4.2	3.1	1,100	8.0	624	10 4 9	2.9		156	146	62
24 25	137	3.8	8.3	223	54	663	49	2.0	881	130		
20				191	4.0	624	305	1.9	796	160	146	62
26	233	3.7	34	1 200	4.8	624	70	12	170	160	146	62
27	135	3.7	27	1,090 1,240	3.8	624	32	16	102	156	146	62
28	60	3.1	36	1,240	3,8		17	5.4	2.9	156	146	62
29	116	3.7	12	1,190		215	ió	2.8	2.4	156	135	62
		3.8		1,190	1	6.7	10	23	~ .	160	111	
50	57		85	1,190		6.0		20				

81 57	1 80	1,100						
31 57		Observed		Storage	Correc	ted for storage		
Month	Maximum	Minimum	Mean	(Mean)	Mean	Per square mile	Run-off in inches	
October November December January February March April May June July August September	272 57 85 1,240 1,190 674 305 23 881 160 264 624	1.6 2.8 2.4 10 3.8 3.3 3.1 1.9 1.4 1.9	103 10.8 12.6 541 716 321 23.2 6.42 284 84.1 177 318	-85.9 +156 +199 +558 -543 -90.0 +379 + 94.5 + 73.7 - 47.8 -142 -215	17.1 167 212 1,099 173 231 402 101 358 36.3 35 103	0.102 1.00 1.27 6.58 1.04 1.38 2.41 .605 2.14 .217 .210 .617	0.12 1.12 1.46 7.59 1.08 1.59 2.69 .70 2.39 .25 .24	
The year	1,240	1.4	213	+ 32.0	245	1.47	19,92	

Shenango River at Sharon, Pa.

Location. - Water-stage recorder, lat. 41°13'55", long. 80°30'35", at Chestnut Street Bridge, at Sharon, Mercer County, 500 feet above mouth of Pine Run. Zero of gage is 840.00 feet above mean sea level.

prainage area. - 608 square miles.

Records available. - October 1918 to September 1921, October 1931 to September 1937

In reports of U. S. Geological Survey; August 1909 to September 1937 in reports of Pennsylvania Department of Forests and Waters.

Average discharge. - 27 years (1910-37), 698 second-feet.

Extremes. - Maximum discharge during year, 12,400 second-feet Jan. 26 (gage height, 13.52 feet), from rating curve extended above 7,000 second-feet; minimum, 59 second-feet Dec. 23 (gage height, 2.86 feet); minimum daily discharge, 96 second-feet Oct. 14.

1909-37: Maximum discharge. 25.200 second-feet Mar. 26, 1913 (gage

1909-37: Maximum discharge, 25,200 second-feet Mar. 26, 1913 (gage height, 18.1 feet), from rating curve extended above 14,000 second-feet; minimum, 6.5 second-feet Sept. 22, 1932 (gage height, 1.63 feet).

Remarks.- Records poor. Discharge for period of recorder failure, Feb. 2-7, determined from once-daily gage readings. Regulation from storage in Pymatuning Reservoir and from power operations upstream. Corrections for storage not included in records except as part of monthly table.

Daily and monthly discharge, in second-feet, 1936-37

Day	Oot.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	165	199	111	2,390	2,290	282	394	1,100	239	171	239	217
2	168	208	163	1,680	2,000	268	366	794	236	152	239	220
3	163	406	163	1,600	1,820	268	343	512	202	137	226	28
4	199	1,100	174	1,200	1,730	292	303	390	152	245	226	74
6	306	2,590	205	859	1,780	689	278	362	135	509	229	3,700
6	268	2,190	252	603	1,730	866	299	672	165	229	526	3,020
7	171	1,360	825	814	1,680	757	314	769	339	158	763	1,89
8	163	1,030	833	3,820	1,730	669	296	546	245	114	807	1,20
9	174	839	556	3,460	2,700	577	347	398	226	158	603	91
10	242	680	480	3,350	2,800	414	390	339	1,280	174	1,080	73
11	292	484	840	2,440	2,190	296	336.	292	1,680	223	1,280	50
12	205	343	994	1,960	2,040	275	285	252	1,100	423	1,200	35
13	147	272	577	1,960	1,960	275	245	265	763	269	953	28
14	96	232	374	3,940	1,910	435	229	374	646	632	751	27
15	135	229	362	7,940	1,910	833	774	444	1,480	1,280	541	26
16	137	292	265	7,760	1,440	833	953	374	1,170	1,620	427	25
17	221	321	236	3,800	1,100	852	697	378	879	1,380	387	21
18	457	406	205	4,740	1,060	933	546	398	906	832	572	19
19	431	498	127	5,200	1,060	988	423	321	1,200	561	462	37
20	292	355	185	3,940	1,140	1,540	336	278	1,440	406	386	61
21	174	324	176	5,920	807	3,820	401	239	1,980	347	969	61
22	128	351	182	9,740	1,400	3,700	1,440	232	3,820	362	1,160	61
23	147	292	119	7,310	1,060	1,910	1,680	236	3,240	289	1,280	72
24	142	248	174	5,280	794	1,640	1,170	226	2,340	226	664	79
25	130	226	199	10,800	663	3,020	1,350	193	2,000	242	452	78
26	439	205	585	10,500	435	2,240	7,160	168	1,780	382	382	80
27	1,020	165	1,240	4,000	386	1,600	8,580	447	1,420	351	347	79
28	639	163	1,680	3,130	299	1,440	5,650	1,880	663	299	314	78
29	347	179	1,280	2,640		1,280	2,790	1,000	404	268	292	78
30	332	168	1,520	2,340		684	1,520	536	214	255	275	78
31	278		2,620	2,240		457		332		248	258	

		Observed		Storage	Corre	ected for a tor	age
Month	Maximum	Minimum	Mean	(Mean)	Mean	Per square mile	Run-off in
October	1,020	96	265	-85.9	179	0.294	0.34
November	2,590	163	545	+156	701	1.15	1.28
December	2,620	111	571	+199	770	1.27	1.46
January	10,800	603	4,108	+558	4,666	7.67	8.84
February	2,800	299	1,497	-543	954	1.57	1.64
March	3,820	268	1,101	- 90.0	1,011	1.66	1.91
April	8,580	229	1,330	+379	1,709	2.81	3.14
May	1,880	168	476	+94.5	570	.938	1.08
June	3,820	135	1,078	+73.7	1,152	1.89	2.11
July	1,620	114	417	-47.8	369	.607	.70
Angust	1,280	226	590	-142	448	.737	.85
September	3,700	199	791	-215	576	.947	1.06
The year	10,800	96	1,062	+32.0	1,094	1.80	24.41

BEAVER RIVER BASIN

Sugar Run at Pymatuning Dam, Pa.

Location. - Staff gage, lat. 41°29'50", long. 80°27'55", at highway bridge at Pymatuning Dam, Crawford County, a quarter of a mile above mouth and 1 3/4 miles northwest of Jamestown. Zero of gage is 984.59 feet above mean sea

Drainage area. - 9.34 square miles.

Records available. - March 1934 to September 1937.

Records available. - March 1934 to September 1937.

Extremes. - Maximum discharge observed during year, 1,820 second-feet Sept. 4 (gage Extremes. - Maximum discharge observed during year, 1,820 second-feet; minimum, height, 6.80 feet), from rating curve extended above 200 second-feet; minimum, 0.3 second-foot Oct.6 (gage height, 0.15 foot).

O.3 second-foot Oct.6 (gage height, 0.15 foot).

1934-37: Maximum discharge, that of Sept. 4, 1937; no flow at times during the years 1934 to 1936.

Remarks. - Records fair except those for extremely high stages and those for law.

Remarks. - Records fair except those for extremely high stages and those for low stages, which are poor. Discharge for high stages determined from graphs based on twice-daily gage readings.

Daily and monthly discharge, in second-feet, 1936-37

T	0-4	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July A	ag.	Sept.
1 2 3 4	0.5 .6 .5	1.2 3.6 11 24	3.3 3.1 3.7 4.7	18 20 23 9.2 5.4	10 5.7 5.4 4.3 4.3	2.9 2.7 3.6 13 23	4.5 5.2 4.1 3.2 3.2	6.8 5.4 4.3 3.6 6.0	1.0 .9 1.2 1.0	1.3 1.3 1.3 1.2	0.55	0.5 .5 .5 460 159
6 7 8 9	.4 .4 .4 .4	22 12 8.3 6.4 4.5	7.4 30 10 4.5 8.2	3.9 16 87 43 32	4.5 3.2 13 48 10	16 11 8.9 6.7 4.1	4.1 3.6 3.2 6.4 5.2	20 7.7 5.0 4.1 3.4	.8 1.2 .8 1.2 8.7	1.6 1.0 .8 4.4 2.5	8.6 61 8.6 4.5 19	12 6.2 4.1 2.7 2.1
10 11 12 13 14	1.2 .7 .5 .5	3.0 2.7 2.5 2.4 6.8	26 11 4.5 3.2 3.2	16 15 12 173 165	5.4 4.5 4.7 12 9.2	3.6 3.4 2.2	4.1 3.0 2.5 2.1 25	2.5 2.4 3.9 8.3 5.9	16 5.9 2.7 13 15	1.2 .9 7.4 9.1 7.4	9.2 4.5 5.0 2.0 1.1	2.0 1.6 1.7 1.3
16 17 18 19	1.8 3.2 2.0 1.0	5.9 7.5 14 6.2	3.0 3.2 3.0 2.0	30 28 173 24 21	8.6 4.1 5.0 12 13	3.2	13 7.0 5.0 3.9 3.0	4.5 8.7 4.5 3.9 2.5	7.7 8.0 19 20 8.0	41 12 4.3 2.5 1.7	.8 .7 .9	•
20 21 22 23 24	.7	7.6 5.2 3.9 3.9	2.4 2.5 2.9 3.1	317 114 36 225 222	22 38 12 7.		6.8 46 22 9.8 48	2.0 1.8 3.0 2.0 1.3	64 11 5.9 4.1	3.9 2.0 1.2 1.0 1.0	13 8.6 2.7	5
26 27 28 29 30	14 8.6 2.9	2.9	35 24 31 5 12 6 27	25 10 8.0 8.0 7.0		7 8.6	16 9.8	1.2 9.9 16 5.2 2.2	2.5 2.5 2.2 1.7	3.9 1.5 1.0 .8 .7	1.5	6
31	1.5		83			Maximum	Minis		Mean	Per squar		n-off in
Model of the second of the sec	otober ovember anuary ebruary arch pril ay une uly ugust					14 45 83 317 48 75 305 20 112 41 61	0.4 1.2 2.0 3.9 3.2 2.1 1.3		1.61 7.79 12.0 61.3 10.1 12.2 22.5 5.14 11.4 3.93 5.19	0.172 .834 1.28 6.56 1.08 1.31 2.41 .550 1.22 .421		0.20 .93 1.48 7.56 1.12 1.51 2.69 .63 1.36 .49 .64 2.67

The year....

Nov.

July.....

August

September.....

The year....

Dec. Jan.

BEAVER RIVER BASIN

139

1.39 2.50

.822 1.72

1.32

1.62

.645

.467

2.79

1.92

1.47

21.91

.95

.74

Location. - Water-stage recorder, lat. 41°25'15", long. 80°22'35", 1,500 feet below WIIliamson Crossing Bridge, 1 mile northeast of Greenville, Mercer County, and 2 miles above mouth. Zero of gage is 953.46 feet above mean sea level.

Drainage area. - 104 square miles.

Records available. - November 1919 to September 1921, October 1931 to September 1937

in reports of U. S. Geological Survey; January 1914 to August 1923, November 1925 to September 1937 in reports of Pennsylvania Department of Forests and

Average discharge. - 17 years (1914-18, 1920-22, 1926-37), 138 second-feet.

Extremes. - Maximum discharge during year, 4,600 second-feet Jan. 25 (gage height, 11.00 feet), from rating curve extended above 2,200 second-feet; minimum, 12 second-feet Oct. 5, 6.

1919-23, 1925-37: Maximum discharge, that of Jan. 25, 1937; minimum, 2.0

second-feet Aug. 21, 1923.

Remarks. - Records excellent except those for extremely high stages and those for periods of ice effect or recorder failure, which are fair. Discharge for periods of ice effect, Nov. 27 to Dec. 1, Dec. 19-24, Feb. 3-7, Feb. 26 to Mar. 3, Mar. 11-13, determined from gage heights, weather records, and by comparison with records for stations in adjacent drainage areas. Discharge for periods of recorder failure, Apr. 16, 17, May 2-7, determined by comparison with records for stations mentioned above. Some regulation at low stages from power operations upstream.

Daily and monthly discharge; in second-feet, 1936-37

July

.588

.944

.611

98.2

63.5

1.09

25.00

.69

June

Aug.

Day	Oct.	MOV.	Dec.	Jan.	200.	201 .	apr.		o uno	July	Aug.	bept.
1	16	42	58	558	240	76	87	187	54	47	28	27
2	19	49	58	266	137	73	90	146	45	42	22	27
	14	153	60	292	117	70	85	112	44	40	24	30
3	14	286	69	180	108	104	85 74	84	49	38	24	70
4	14	740	68 74	119	102	313	68	90	42	43	22	480
5	12	740	79	119	102	313		30	36	10	LL.	
6	12	540	88	92	100	269	86 91	273	39	42	21	351
7	16	280	381	179	102	188	91	171	67	35	32	128 75
8	19	19Q	247	1,130	139	152	78	115	76	32	49	75
9	16	141	145	877	523	125	110	98	51	30	42	56
10.	43	111	128	682	318	88	104	91	375	40	170	47
11	72	89	395	376	125	95	85	78	403	32	533	42
12	42	74	262	239	122	85	71	71	154	30	211	42
	29	67	126	185	108	75	63	87	86	32	140	40
13	24	62	120	846	144	65	59	138	354	94	71	47
14	24	02	120 95	0.430	152	62	214	122	702	104	48	46
15	22	88	95	2,410	152	62	214	122	702	104	**0	
16	18	111	76	1,110	126	62	248	94	258	360	38	38 35 31
17	57	103	71	438	101	66	138	126	147	252	35	35
18	164	178	66 61	1,150	96	84	99	98	256	98	74	31
19	105	122	61	998	98	87	85	84	225	61	53	30
OS	58	90	58	359	146	178	72	71	132	48	38	28
21	40	116	57	1,550	160	731	99	63	288	40	40	29 25 24
22	32	103	56	1.960	376	394	440	60	840	35	623	25
23	28	82	56	1,110	199	188	478	74	329	31	301	24
24	28	76	58	1,960 1,110 735	138	138	222	65	143	35	104	23
24	28		68	3,590	103	494	217	52	102	32	68	23
25	28	70	00	3,390	100	202		52	102	J. J.	00	
26	204	64	244	1,240	92	341	2,210	47	80	59	54	23 23 22
27	225	66	362	414	85	176	1,840	153	68	45	46	23
28	102	63	489	266	80	136	807	495	63	35	40	22
29	66	59	255	211		126	459	194	56	30	34	21
30	55	58	360	183		111	274	95	49	27	31	21
31	47		676	216		99		66		25	29	
		Mos	nth		Ma	Aximum	Minimu	ım i	Mean	Per squa		-off in
0-+	-h					225	12		52.5	0.505		.58
					I I	740	42		142	1.37		.53
					1	676	56		172	1.65		.90
							92		773	7.43		57
					4	3,590						
						523	80		155	1.49		.55
Mar	oh					731	62		169	1.62		.87
						2,210	59		302	2.90		.24
-					1	495	47		119	1.14	1	.31
_						840	39		186	1.79	2	.00
- 441	•						05		07 3	E00		00

623

480

25

21

21

12

Location. - Water-stage recorder, lat. 41°18'40", 80°28'40", 2 miles above mouth, 3 miles southeast of Orangeville, Mercer County, and 3 miles north of Sharps-

ville. Zero of gage is 872.94 feet above mean sea level.
Drainage area. - 169 square miles.

15

Records available. - October 1918 to September 1921, October 1931 to September 1937 in reports of U. S. Geological Survey; January 1914 to August 1923, November 1925 to September 1937 in reports of Pennsylvania Department of Forests and

Average discharge. - 19 years (1914-22, 1926-37), 205 second-feet.

Extremes. - Maximum discharge during year, 3,040 second-feet Jan. 25 (gage height, 10.41 feet, from rating curve extended above 2,200 second-feet; minimum, 8.2 second-feet Oct. 8, 9 (gage height, 1.40 feet).

1914-23, 1925-37: Maximum discharge, 3,250 second-feet Mar. 25, 1936 (gage height, 10.68 feet), from rating curve extended above 2,200 second-feet; minimum, 0.5 second-feet, Sept. 25, 1933

minimum, 0.5 second-foot Sept. 25, 1933.

Maximum stage known, 16.0 feet (revised), from floodmark, former site and datum, Mar. 26, 1913 (probably affected by backwater from Shenango River, discharge not determined).

Remarks. - Records fair. Discharge for periods of ice effect, Nov. 27 to Dec. 5,

Dec. 19-24, determined from gage heights, weather records, and by comparison with records for stations in adjacent drainage areas. Discharge for periods of recorder failure, May 27 to June 2, June 12-22, July 8-12, Sept. 17-20, determined by comparison with records for stations mentioned above. Some regulation from operation of mills upstream.

Daily and monthly discharge, in second-feet, 1936-37

ay	Oot.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	ug.	Sept.
-		43	52	725	246	88	126	501	63	44	15	15
2	13		51	770	194	79	111	322	41	36	13	20
2	13	50		680	148	70	98	153	34	32	12	20
3	11	91	51	545	152	83	86	98	31	77	11	437
4	10	259 412	54 66	423	105	161	77	91	26	157	11	1,240
5	10	415				07.0	70	181	29	58	54	1,730
6	9.3	412	83	253	101	216	79		68	36	252	1.060
7	9.3	423	200	261	89	246	73	238			239	1,060
8	8.6	434	261	693	110	255	72	188	42	30	129	478
	8.5	392	227	765	345	212	94	122	40	25	129	
10	17	315	170	1,060	373	140	96	92	377	27	143	354
			03.0	950	403	97	90	73	393	35	161	184
11	20	195	218		373	82	76	61	434	68	212	8
12	16	119	227	695	286	74	64	60	289	53	227	5
13	15	88	227	536		62	55	87	238	97	190	4
14	15	72	192	1,020	197		145	105	558	245	108	3
15	14	70	133	2,090	190	58	140	100	000			
	13	83	106	2,300	185	57	219	105	668	589	60	3
16		100	71	1,690	200	62	233	118	363	403	37	2
17	32		64	1,690 1,630	136	74	206	114	246	325	58	2
18	67	126		1,580	130	99	148	98	325	228	31	2
19	74	137	60	1,580 1,100	158	246	103	84	298	152	24	1
20	75	123	56	1,100	200					7.44	42	1
	61	113	52	1,630	214	631	117	68	227	144	60	
21			49	1,630 2,300	348	585	353	60	467	155	69	
22	50	104	48	2,000	354	618	403	62	890	85	99	1
23	38	90	40	2,000 1,570	363	509	424	53	740	46	70	1
24	28 21	81 73	49 58	2,850	307	633	519	48	606	34	46	1
25	2.1				385	434	1 990	48	489	51	34	1
26	87	62	166	2,540	175		1,880 2,490	151	379	46	27	1
27	131	63	303	1,630	121	403	2,450	298	208	34	22	1
28	137	60	434	1,060	98	354	2,120		94	24	22 18	1
	102	54	392	622		269	1,380	354		20	16	ī
29	72	52	534	404		190	740	173	60	18	15	
30	54	02	697	278		148		100		18	10	
		Mo	onth		K	aximum	Minim	am.	Mean	Per squar		-off i
						3.50	8.	5	39.7	0.235	_	0.27
Oot	ober				• • •	137 434	43	0	157	.929		1.04
NOV	ember					697	48		173	1.02		1.18
Dec	ember						253	1	184	7.01		8.08
Jan	nary				2	8,850 403	89	-,	218	1.29		1.34

2,480

501

890

589

252

1,730

55

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18 11 13

422

139

291

109

223

78.9

March....

April.....

Kay.....

June....

July.....

August....

September.....

The year

Connoquenessing Creek at Hazen, Pa.

Location. - Chain gage, lat. 40°49'00", long. 80°14'35", at highway bridge at Hazen, Beaver County, half a mile above mouth of Brush Creek. Zero of gage is 852.31

feet above mean sea level.

Drainage area. - 356 square miles.

Records available. - October 1919 to September 1921, October 1931 to September 1937

In reports of U. S. Geological Survey; June 1915 to September 1937 in reports of Pennsylvania Department of Forests and Waters.

of Pennsylvania Department of Forests and Waters.

Average discharge.— 18 years (1919—37), 490 second—feet.

Extremes.— Maximum discharge during year, 13,000 second—feet Jan. 25 (gage height, 13.01 feet, from floodmark), from rating curve extended on basis of slope—area determination; minimum, 28 second—feet Sept. 30 (gage height, 1.12 feet).

1915—37: Maximum discharge, 20,300 second—feet June 29, 1924 (gage height, 16.66 feet), from rating curve extended above 13,000 second—feet; minimum, 6.0 July 21—23, 1936 (gage height, 0.82 foot).

Remarks.— Records good except those for periods of ice effect, Nov. 28 to Dec. 5, Dec. 20—25, Feb. 4—6, which are fair and were determined from gage heights, weather records, and by comparison with records for stations in adjacent drain—age areas. Discharge for high stages determined from graphs based on twice—daily gage readings. Some regulation from operation of mills upstream.

Daily and monthly discharge, in second-feet, 1936-37

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	97	142	76	1,310	822	203	294	888	154	102	55	81
2	89	168	74	1,450	545	206	274	545	134	97	46	70
3	58	365	74	1,590	435	185	243	518	117	91	40	123
4	39	2,590	80	1,120	390	258	226	435	119	127	38	270
5	43	5,680	100	822	360	270	218	985	104	1,360	35	545
6	33	1,940	304	665	340	229	243	1,240	93	445	40	340
7	59	1,590	822	597	322	212	240	855	86	197	830	232
8	76	985	635	985	408	197	274	665	91	140	410	150
9	86	605	575	888	952	194	330	545	100	112	177	117
10	1,560	462	435	1,120	790	179	330	462	168	99	810	99
11	985	365	365	1,310	575	163	278	385	206	511	3,160	104
12	435	317	725	1,050	490	144	250	330	152	2,050	1,240	142
13	250	290	462	888	545	142	229	574	93	822	725	121
14	119	243	286	1,100	518	132	250	1,570	427	822	435	119
15	119	206	294	4,840	490	137	1,500	1,180	294	635	250	102
16	112	203	282	2,900	410	137	971	855	168	855	152	68
17	163	174	229	1,730	317	142	695	920	335	790	125	64
18	575	168	185	3,660	290	154	575	635	490	605	123	59
19	370	137	191	2,730	312	222	490	490	350	545	236	55
20	246	125	175	1,920	308	418	410	435	197	605	188	54
21	203	144	170	7,080	322	1,590	658	370	774	462	429	50
22	165	130	165	12,500	545	1,240	2,220	340	2,430	232	3,620	44
23	147	121	170	6,540	435	920	1,800	410	822	188	1,020	38
24	134	112	200	3,940	385	725	1,450	290	490	150	518	37
25	140	110	400	10,700	350	855	1,170	266	299	304	365	35
26	171	99	1,180	5,100	274	855	10,700	254	218	232	290	37
27	340	81	1,240	1,870	229	758	8,620	254	203	171	250	32
28	206	90	1,660	1,240	200	605	3,170	236	168	108	188	31
29	218	85	1,800	985		518	1,800	226	147	81	140	30
30	203	78	1,050	758		410	1,180	203	121	68	125	28
31	165		1,660	. 790		340		174		60	125	

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	1,560	53	245	0.688	0.79
November	5,680	78	594	1.67	1.86
December	1,800	74	518	1.46	1.68
January	12,500	597	2,715	7.63	8.80
February	952	200	441	1.24	1.29
March	1,590	132	411	1.15	1.35
April	10,700	218	1,370	3.85	4.30
May	1,570	174	566	1.59	1.83
June	2,430	86	318	.893	1.00
July	2,050	60	421	1.18	1.36
August	3,620	35	522	1.47	1.70
September	545	28	109	306	.34
The year	12,500	28	689	1.94	26.28

Slippery Rock Creek at Wurtemburg, Pa.

Location. - Chain gage, lat. 40°51'40", long. 80°14'35", at highway bridge at wurtemburg, Lawrence County, 1 mile above mouth. Zero of gage is 812.48 feet above mean sea level.

Drainage area. - 406 square miles.

Records available. - October 1918 to September 1920, October 1931 to September 1937

in reports of U. S. Geological Survey; January 1912 to September 1937 in reports of Pennsylvania Department of Forests and Waters.

Average discharge. - 24 years (1912-32, 1933-37), 558 second-feet.

Extremes. - Maximum discharge during year, 25,700 second-feet Jan. 25 (gage height, 12.05 feet, from floodmark), from rating curve extended above 8,000 second-feet; minimum, 49 second-feet Oct. 9 (gage height, 2.32 feet); minimum daily discharge, 54 second-feet Oct. 9.

54 second-feet Oct. 9.

1912-37: Maximum discharge, that of Jan. 25, 1937; minimum, 11 second-feet Sept. 8, 1925; minimum daily discharge, 16 second-feet Sept. 8, 1925.

Remarks. - Records fair. Discharge for periods of ice effect, Nov. 25 to Dec. 6,

Dec. 20-24, determined from gage heights, weather records, and by comparison with records for stations in adjacent drainage areas. Discharge for high stages determined from graphs based on twice-daily gage readings. Regulation from power operations upstream.

Daily and monthly discharge, in second-feet, 1936-37

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	74	137	130	2,200	1,260	280	370	1,010	261	122	85	119
2	72	137	130	1,660	850	280	345	810	228	128	74	102
3	63	754	130	1,570	575	280	320	612	189	140	72	113
4	65	2,350	140 150	1,260	465 465	261 500	300 280	465 930	179 192	249 1,050	65 70	269
6	59	4,300	130	890	400	300	200	930	192	1,000	70	1,950
6	61	3,220	170	612	465	612	345	1,570	179	1,090	59	1,390
7	59	1,860	690	538	430	465	370	1,390	189	970	280	810
8	56	1,050	1,170	1,480	522	400	320	850	189	500	400	400
9	54 235	730 500	575 400	1,570	1,480	370 300	500 612	650 575	156 213	242 166	228 970	261 220
10	233	300	300	1,000	1,000	300	OLL	010	7,10	100	310	220
11	345	370	730	1,570	730	261	465	465	430	283	2,680	217
12	213	300	730	1,170	538	261	345	370	261	1,340	3,220	280
13	137	261	650	930	465	231	300	1,130	199	1,090	1,970	261
14	102 76	235	465 430	1,310	465 575	213	280 690	2,660	166 206	770 430	1,170 575	280
15	10	242	200	0,040								
16	63	231	320	5,230	575	228	1,010	1,390	345	890	280	166
17	146	206	280	2,300	430	213	650	1,090	261	690	210	143
18	370	217	320	4,300	345 370	261 345	465 430	899 650	400 500	400 261	220 345	134
19 20	280	238	261 250	3,540	370	690	370	465	370	203	261	108
21	143	210	240	5,970	1,010	1,890	765 1,860	400	1,000	166 146	355 1,980	98 92
22	105 92	196	235	11,800 7,560	810	1,130	1,970	500	1,570 970	113	1,750	88
25 24	88	179	270	4,800	500	810	1,260	465	650	113	1,170	81
25	88	160	500	19,600	430	1,080	1,160	320	345	105	650	72
26	186	155	810	8,520	300	1,390	10,100	-280	280	217	370	78
27	370	150	1,390	2,680	280	890	10,600	370	175	179	300	74
28	300	145	1,480	1,660	280	575	4,480	1,230	172	143	261	74
29	210	140	1,170	1,210		538	2,190	850	146	110	175	72
30	172	135	1,390 2,380	1,050	1	465	1,390	430 280	128	90 83	128 146	74
		Mon			Max	ximum	Minimum		lean	Per squa		-off in
Oat	ober	····				370	54		149	0.367		.42
	ember					300	135		640	1.58		.76
	ember					380	130		588	1.45		.67
	uary				19,	600	538	3,	502	8.63	9	,95
	ruary					480	280		596	1.47		• 53
	oh				1,	890	206		564	1.39		.60
	il					600	280	1,	485	3.66		.08
						660 570	280 128		822 352	2.02		.33 .97
	0					340	83		403	.993		.14
	v											
Jul	y nat											
Jul;	y ust tember				3,	220 950	59 72		662 280	1.63 .690	1	.88 .77

The year..... 19,600

9999999 9999999 118,300 118,300 13,000 10,000 Disobarge Pec. 3 Peb. 3 Bridge & Bethleben.
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Chartlers Greek Kiskiminetas Blacklick Gredonetone Gredone

pth in inches, precipitation sept. 30, 1937
Delaware River Basin

3

		-T.
Per cent	Run-of. to pre-	หนุ่นองเหล่นของ หลัง สามาร์ เล่า อัก ก่านกลัก ของ ค่อ น่านากอักกั
Precip- itation	Depth in inch es	さって まって こうさ こう
Run- off	Depth in inches	3.2.2.2.2.2.2.2.2.2.2.2.2.2.2.2.2.2.2.2
	Toer	
	Sept.	・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・
	Aug.	so i india i i so i ingo o i vino o i con i india o
	July	0 1 89 0 2 8 1 4 4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
square mile	June	2400000 111
per squa	Key	*************************************
44	Apr.	* wv. * * w. * v. * v. * v. * v. * v. *
second-fe	Mar.	さいいいいい はいいいいい はいいいいい はいいいいい はいいいい はいいい にいいい にいいい はいいい はいいい はいい は
Run-off in	Feb.	ららららするとことではよればいるできます。 ありなららまでしまませます。 からなららまでしたよればのがは
Run	Jan.	ようさられま ううようしょしょ たのでののよれの でははいいのの たのでのらればの でははいいがい
	Dec.	199199199111111 9094 409015980581999 948661980 54440199
	Nov.	COLUMNIA RICO IL INCLIANTA A MARCO ROLLO R
	00 t.	の でいいにはますらいまでいるのでです まかずののはただったがいのののがなす まかずるのでんがのがいなっている。
Drain- age area	Square	545. 545. 545. 545. 545. 545. 545. 545.
2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2		Delaware River Basin Delaware River at Port Jervis, M.Y Delaware River at Belviders, M.J. Delaware River at Elenton, M.J. Lackaraxen River at Trenton, M.J. Lackaraxen River at Trenton, M.J. Bushkill Greek at Shoemakers. McMichaels Greek at Shoemakers. Lehigh River at Bathlehem. Lohigh River at Bethlehem. Schuylkill River at Pottstown. Schuylkill River at Pottstown. Schuylkill River at Pottstown. Schuylkill River at Pottstown. Creek at Woodlyn. Ridley Greek at Woollyn. Chester Greek at Woollyn. Chester Greek at Woollyn. Chester Greek at Woollyn. Brandywine Greek at Ghaster.

6t c 100	Drain- age area				Run	Run-off in	-puooes	ree t	per squ	square mile					Run- off	Precip 1tatin	Per
	Square miles	00 t.	Nov.	Deo.	Jan.	Feb.	Mar.	Apr.	Key	June	July	.gn¥	Sept.	Tear	Depth in inches	Depth in inobes	Run-off to pre- cipite
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River at lampfort Dimeling	5,682	.621	2.00	1.73	7.7. 3.18.	1:4	1.54	3.99	2.58	.518	.336	700	350	2.05	24.17	# # # # # # # # # # # # # # # # # # #	15.83
of Sinneme.ing Run	281	.227	1.43	2.57	8.10	.875	₩56.	0	2.60	1.1	219.	-5.	.181	2.06	27.95	45.48	61.5
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off depth in inches, precipitation, and per cent run-Sept. 30, 1937 Susquebanna River Basin

4.

Per	Run-off to pre- oipite-	25 EV 24 EV	14
Pre- oipiti- tetion	Depth Ruinches of	334 1146	
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	į	0.953	
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	July	0.946	
equare aile	June	0.678	
r squar	À	ENC.	
8,	Apr.	1.56	
in second-feet	Mar.	1.25	
	₹ •b.	1.99	
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٠	Dec.	0.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0	
	For.	95.0 395.	
	00 t.	0 6884 6484	
Drain- age area	Square	117	
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mile, run-off depth in inches, precipitation, and per cent run-off to precipitation, for the year ending Sept. 30, 1937
Ohio River Basin

Per cent	Run-off to pre-	GERYGGGREVGGGGG GRU JRVYGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG
Precip- itation	Depth in inches	さんかいないないはいいいいいいい いんかいいいいん しんかいんしょう しゅうしょう しゅうしょう しゅうしょう しゅうしょう しゅうしょう しゅうしゅう しゅう
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Station		Allegheny River at Larabee. Allegheny River at Franklin. Allegheny River at Franklin. Allegheny River at Franklin. Allegheny River at Franklin. Allegheny River at Parkere Landing. Chio River at Sewickley. Brokenstraw Greek at Youngsville. French Greek at Garters Corners. French Greek at Garters Corners. French Greek at Utlca. French Greek at Utlca. French Greek at Utlca. Gussewago Greek near Meadville. Glarion River near Pord Gity. Klakhnine tas River at Avonmore. Blacklick Greek at Blacklick. Loyalhanra Greek at Blacklick. Loyalhanra Greek at Blacklick. Loyalhanra Greek at Blacklick. South Fork of Fenmile Greek at Jefferson. Youghlogheny River at Connellsville. South Fork of Fenmile Greek at Jefferson. Futle Greek at Frafford. Blay Finey Run near Balisbury. Laurel Hill Greek at Ursina. Blay Finey Run near Salisbury. Laurel Hill Greek at Ursina. Shenargo River at Pymaturing Dam. Shenargo River at Sharon. Shenango River at Sharon. Shenango River at Sharon. Shenango River at Sharon. Shenango River at Sharon. Shanango River at Sharon. Shanango River at Bymaturing Dam. Little Shenango River at Greenville. Pymatuning Greek near Orangeville. Pymatuning Greek near Orangeville. Slippery Rock Greek at Wurtemburg.

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			41.85 42.98	
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		Year	1.50	
		Se po t.	0.265	
		Aug.	ካከተ .	
		July	0.200	
	mile	June	0.384 .460	
	square mile	May	1.40	
	set per	Apr.	5.57	
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Potomac River Basin		Feb.	1.80 1 2.73 1	
		Jan. F	-	
			3.82	
		Dec.	1.75	
		Nov.	.369	
		0c t.	.20t	
	Drain- age area	Square	30.2	
	Station		Potomac River Basin Evitts Creek in Bedford Valley Licking Creek near Sylvan	

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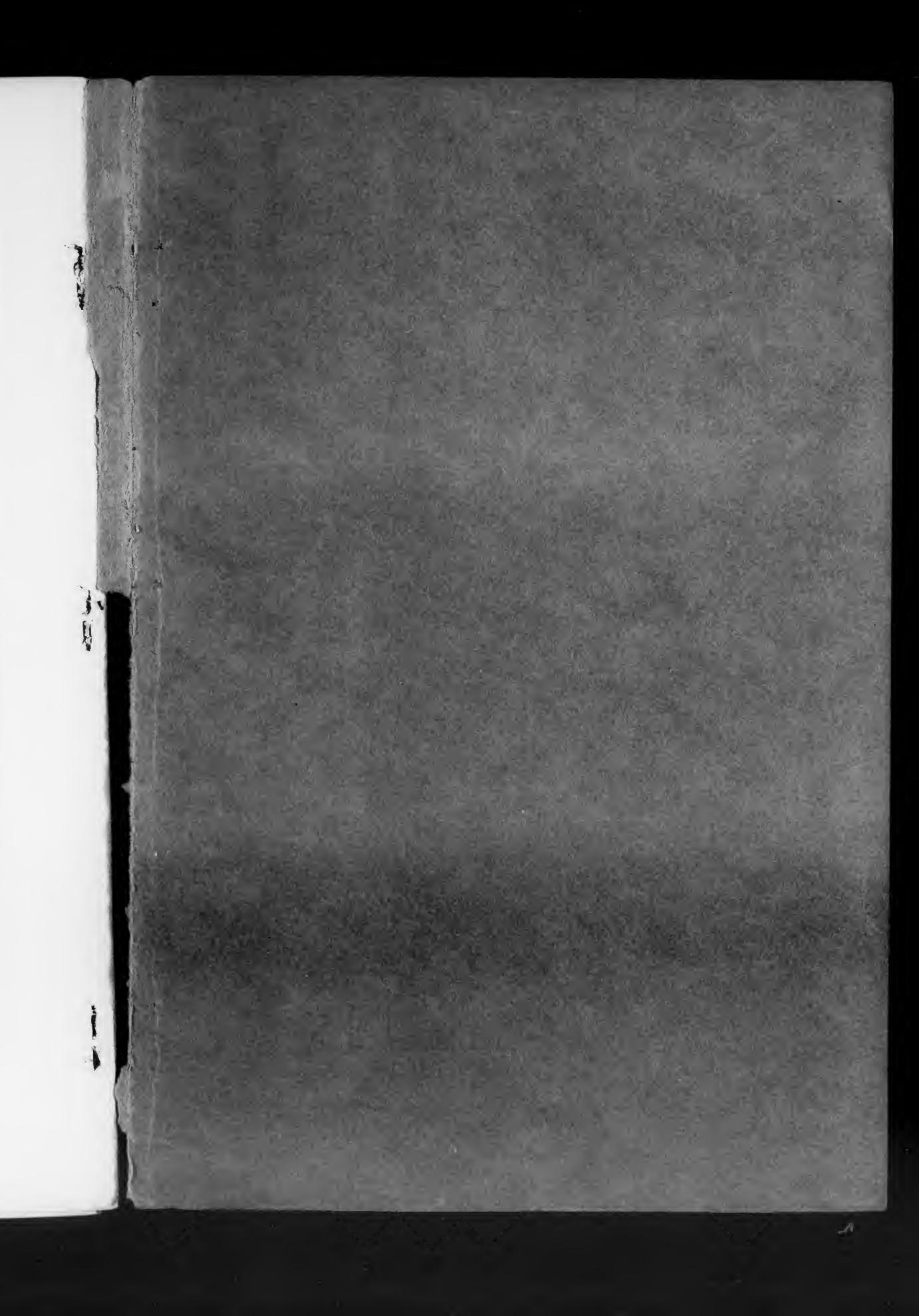
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END OF REEL PLEASE REWIND

